

PIAAC-Longitudinal (PIAAC-L) 2016 - Acquisition of Competencies: Cognitive Pretest

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Veröffentlichungsversion / Published Version
Arbeitspapier / working paper

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:
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Empfohlene Zitierung / Suggested Citation:

Otto, W., Neuert, C., Landrock, U., Adams, F., Disch, K., Gebhardt, S., Menold, N. (2015). *PIAAC-Longitudinal (PIAAC-L) 2016 - Acquisition of Competencies: Cognitive Pretest*. (GESIS Project Reports, 2015/14). Mannheim: GESIS - Leibniz-Institut für Sozialwissenschaften. <https://doi.org/10.17173/pretest87>

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GESIS Project Reports

2015|14

PIAAC-Longitudinal (PIAAC-L) 2016 – Acquisition of Competencies

Cognitive Pretest
September 2015

*Wanda Otto, Cornelia Neuert, Uta Landrock,
Franziska Adams, Katharina Disch,
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DOI: [10.17173/pretest87](https://doi.org/10.17173/pretest87)

Citation

Otto, W.; Neuert, C.; Landrock, U.; Adams, F.; Disch, K.; Gebhardt, S.; et. al. (2015): PIAAC-Longitudinal (PIAAC-L) – Acquisition of Competencies. Cognitive Pretest. *GESIS Projektbericht*. Version: 1.0. GESIS - Pretestlabor. Text. <http://doi.org/10.17173/pretest87>

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1 Aims of the pretest

The project "Acquisition and Use of Competencies in Adulthood – Network for the Analysis, Further Development and Dissemination of PIAAC" (PIAAC-Leibniz-Network) aims at advancing research in the context of PIAAC as well as the transfer of corresponding results to the scientific community, politics and practice. In addition to GESIS, which has taken over the leadership of the network, seven other Leibniz institutes (DIE, DIPF, DIW, ifo, IPN, IIfBi and WZB) and external project partners (Prof. Dr. Jürgen Baumert, Prof. Dr. Claus H. Carstensen, Prof. Eric A. Hanushek and Prof. Dr. Harm Kuper) are involved.

In addition to the evaluation of PIAAC data, the research is carried out in close cooperation with the German PIAAC longitudinal study (PIAAC-L), also conducted by GESIS, within the framework of which further annual surveys are conducted on the German PIAAC sample in the years 2014 to 2016.

One module of the PIAAC-Leibniz network is concerned with the further development of questions to be tested within the framework of PIAAC-L. On the one hand, this involves questions which can record further training in a more differentiated way and thus better explain participation in further training, and on the other hand, it involves calculating measures which best reflect the correspondence between individual competencies and requirements in the job. It is to be investigated whether a missing match (skill mismatch) can be validly ascertained by direct questioning (self-report).

To prepare the survey, selected parts of the survey instrument should be subjected to a cognitive (laboratory) pretest under methodological and questionnaire-related aspects, revised on the basis of the test results and – where possible – improved.

For this purpose the GESIS pretest laboratory was commissioned by the PIAAC-Leibniz network project group to carry out the cognitive pretest. The contact persons on the project group side were Natascha Massing and Dr. Anja Perry (GESIS).

2 Sample

Number of cognitive interviews: 18

Selection of target population: Quota sampling

Quota scheme:

Employment status	Education		Total
	Less than A-Levels	Advanced technical college entrance certificate/A-Levels	
Employed	7	7	14
Not employed	2	2	4
TOTAL	9	9	18

Key characteristics of the test persons:

Test person ID	Sex	Year of birth	Employed
01	male	1977	Yes
02	female	1982	Yes
03	female	1987	Yes
04	female	1984	Yes
05	female	1973	Yes
06	male	1987	Yes
07	male	1982	Yes
08	female	1987	Yes
09	male	1984	Yes
10	female	1982	No
11	male	1980	Yes
12	male	1979	No
13	female	1977	Yes
14	female	1982	Yes
15	male	1984	Yes
16	female	1954	Yes
17	male	1968	No
18	female	1963	No

3 Methods

Field time:	5 August to 24 August 2015
Number of cognitive interviewers:	7 ¹
Pretests conducted in the lab (video-recorded):	18
Procedure:	Use of an evaluation questionnaire
Mode:	Face-to-face interview
Cognitive techniques:	General Probing, Specific Probing, Comprehension Probing, Information Retrieval Probing, Emergent Probing.
Incentives for respondents:	15 Euro

¹ Of the 18 interviews, eight were conducted by the clients. All interviews were analyzed by the GESIS pretesting staff.

4 Results

Question to be tested:

1. Welchen höchsten allgemeinbildenden Schulabschluss haben Sie
 [What is the highest general school-leaving certificate you have?]
 Bitte sagen Sie es mir anhand der Liste 1.
 [Please tell me using list 1.]
 TL: Liste 1 vorlegen.
 [TL: Show list 1.]

Frequency distribution (N=18)

Highest general school-leaving certificate		TP
1	Von der Schule abgegangen, ohne die Grundschule beendet zu haben [Dropped out of school without having finished primary school]	-
2	Von der Schule abgegangen ohne Hauptschulabschluss (Volksschulabschluss), jedoch nach Beendigung der Grundschule [Leaving school without a secondary school-leaving certificate (basic primary and secondary school leaving certificate), but after finishing elementary school]	-
3	Hauptschulabschluss (Volksschulabschluss) [Secondary school-leaving certificate (basic primary and secondary school-leaving certificate)]	5
4	Realschulabschluss (Mittlere Reife) [Intermediate school-leaving certificate]	4
5	Abgang von der Polytechnischen Oberschule nach der 8. Klasse (nach 1965) [Leaving the polytechnic secondary school after the 8th grade (after 1965)]	-
6	Abgang von der Polytechnischen Oberschule nach der 10. Klasse (vor 1965: 8. Klasse) [Leaving the polytechnic secondary school after the 10th grade (before 1965: 8th grade)]	-
7	Fachhochschulreife, Abschluss Fachoberschule [Advanced technical college entrance qualification, completion of technical secondary school]	-
8	Allgemeine oder fachgebundene Hochschulreife / Abitur (Gymnasium bzw. EOS, EOS mit Lehre) [General or subject-related higher education entrance qualification / "Abitur" (Gymnasium or EOS, EOS with apprenticeship)]	9
9	Abendschule: Abitur oder Hochschulreife [Evening school: "Abitur" or higher education entrance qualification]	-
10	Einen ausländischen Schulabschluss [A foreign school-leaving certificate]	-
11	Einen anderen Schulabschluss [A different school-leaving certificate]	-
12	Ich habe noch keinen allgemeinbildenden Schulabschluss, ich gehe noch zur Schule (z.B. Haupt-, Realschule, Gymnasium) [I do not yet have a general school-leaving certificate, I still go to school (e.g. secondary modern school, intermediate school, Gymnasium)]	-

Cognitive Techniques:

Emergent Probing

Findings:

This question was asked to all 18 test persons. Five test persons (TP 11, 12, 13, 17, 18) state that their highest general school-leaving certificate is the secondary modern school-leaving certificate or basic primary and secondary school-leaving certificate. Four test persons (TP 01, 02, 03, 05) state that their highest general school-leaving certificate is the intermediate school-leaving certificate or "Mittlere Reife". The remaining nine test persons (TP 04, 06, 07, 08, 09, 10, 14, 15, 16) choose the general or subject-related higher education entrance qualification or "Abitur" (Gymnasium or EOS, EOS with apprenticeship) as their highest general school-leaving certificate.

In order to answer the question, the test persons were presented with the above list of twelve different highest general school-leaving qualifications. No difficulties worth mentioning arise when answering the question using this list and all test persons can easily assign themselves to a corresponding category. It is only noticeable that the two test persons 12 and 17 answered the question immediately and that the list was superfluous in these cases.

Recommendations:

Question: No changes recommended.

Answer options: No changes recommended.

Question to be tested:

2. Welchen höchsten beruflichen Ausbildungsabschluss bzw. Hochschulabschluss haben Sie?
[What is your highest vocational training qualification or university degree]
- Sagen Sie es mir bitte anhand der Liste 2.
[Please tell me using list 2.]
TL: Liste 2 vorlegen.
[TL: Show list 2.]

Frequency distribution (N=18)

Highest vocational training qualification or university degree		TP
1	(Noch) keinen beruflichen Ausbildungs- oder Hochschulabschluss [No vocational training or university degree (yet)]	2
2	Beruflich-betriebliche Berufsausbildung (Lehre) abgeschlossen [Vocational training (apprenticeship) completed]	5
3	Beruflich-schulische Ausbildung (Berufsfachschule, Handelsschule, Kollegschele oder Schule des Gesundheitswesens (1-jährig)) abgeschlossen [Vocational school education (vocational school, commercial school, college school or school of health care (1 year)) completed]	1
4	Ausbildung an einer Fachschule, Meister- oder Technikerschule abgeschlossen [Completed training at a technical school, master-craftsmenschool or technician school]	1
5	Berufs- oder Fachakademie, Duale Hochschule oder Schule des Gesundheitswesens (2-3-jährig) abgeschlossen [Vocational or specialist academy, dual university or school of health care (2-3 years) completed]	1
6	Fachhochschulabschluss: Bachelor / Ingenieurschulabschluss [University of Applied Sciences degree: Bachelor / Engineering degree]	-
7	Fachhochschulabschluss: Master oder Diplom [University of Applied Sciences degree: Master or Diploma]	-
8	Hochschulabschluss: Bachelor [College degree: Bachelor]	1
9	Hochschulabschluss: Diplom, Magister, Staatsexamen oder Master [University degree: diploma, „Magister“, state examination or master’s degree]	5
10	Promotion [Doctorate]	1
11	Einen ausländischen beruflichen Abschluss [A foreign vocational qualification]	-
12	Einen anderen beruflichen Abschluss [Another vocational qualification]	1

Cognitive techniques:

Emergent Probing

Findings:

This question was asked to all 18 test persons. All respondents can assign themselves to a corresponding highest vocational training qualification or university degree on the basis of the list. Four test persons (TP 05, 08, 09, 10) experienced different difficulties in answering the question:

Test person 05 has problems to find her correct education degree in the list. The test person has attended a private language school for three years. At the beginning she tends to mistakenly assign herself to category 3 (vocational school education). At the interviewer's request, she finally correctly chooses category 12 (another vocational qualification).

Test person 08 also has difficulties finding her highest vocational training or university degree in the list: *"Not included. I am a specialist nurse in intensive care medicine and anesthesia. That would be regular point no. 5. For three years you become a normal nurse. And then you study for two more years to do the specialty training. It is also state-approved."*² Test person 08 finally decides to only indicate the training to become a "normal nurse" and finally assigns her highest vocational training qualification to the value 5 (vocational or specialist academy, dual university or school of health care (2-3 years old) completed): *"I would then have indicated the 5 and would have embezzled the additional training"*³ (TP 08). Accordingly, the test person does not see corresponding additional vocational qualifications covered in the list. According to the test person, category 12 (another vocational qualification) is not suitable for her.

The test persons 09 and 10 also criticize the submitted list. Test person 09 has difficulties in identifying which of the options represents "classical vocational training". Based on a question from the test director, the test person finally opted for category 2 (vocational training (apprenticeship) completed) and thus correctly assigned herself to the category corresponding to her training. Test person 10 states that she *"even has the second state examination"*⁴, but that this option is not explicitly mentioned in the list, yet she correctly classifies herself in category 9 (university degree: diploma, "Magister", state examination or master's degree).

Recommendations:

Question: No changes recommended.

Answer options: We recommend for those answer categories for which additional qualifications are possible (e.g. vocational or specialist academy or second state examination) to expand the corresponding options in order to prevent respondents from choosing an answer option that does not adequately reflect their professional qualification.

In order to enable a correct allocation of unclear cases, e.g. nurses (category 5: vocational or specialist academy, dual university or school of health care (2-3 years) completed) with a 2-year additional training as a specialist nurse (category 12: another vocational qualification), a half-open answer category should be offered:

² *"Ist nicht dabei. Ich bin Fachkrankenschwester in Intensivmedizin und Anästhesie. Das wäre regulär Punkt Nr. 5. Für drei Jahre wird man normale Krankenschwester. Und dann lernt man noch zwei Jahre weiter, um da die Fachweiterbildung zu machen. Die ist auch staatlich anerkannt"* (TP 08)

³ *"Ich hätte dann die 5 angegeben und die Zusatzausbildung unterschlagen"* (TP 08)

⁴ *"sogar das zweite Staatsexamen"* (TP 10)

Another professional qualification, namely_____

[Einen anderen beruflichen Abschluss, und zwar_____]

Similarly, category 11 (a foreign vocational qualification) could also be adapted:

A foreign vocational qualification, namely_____

[Einen ausländischen beruflichen Abschluss, und zwar_____]

Question to be tested:

3. Bei den folgenden Fragen geht es um berufliche Weiterbildung. Wir meinen damit jede Weiterbildungsmaßnahme, die eine berufliche Vorbildung vertieft, erweitert oder bei der, wie bei einer Umschulung, eine berufliche Veränderung angestrebt wird. Dabei geht es nicht nur um fachliches Wissen, sondern auch um andere Fertigkeiten wie Sprachen und Computernutzung. Der zeitliche Umfang der Weiterbildung kann wenige Stunden bis mehrere Monate umfassen. Die Initiative kann durch Sie selbst, durch Ihren Arbeitgeber oder durch eine öffentliche Einrichtung wie der Bundesagentur für Arbeit erfolgen. Bildungsgänge, die Sie schon angegeben haben, sind hier nicht gemeint.
- [The following questions are about further vocational training. By this we mean any further training measure that deepens or expands on previous vocational training or, as in the case of retraining, aims to change careers. This is not only about specialist knowledge, but also about other skills such as languages and computer use. The duration of the further training can range from a few hours to several months. The initiative can be taken by yourself, by your employer or by a public institution such as the Federal Employment Agency. Courses that you have already indicated are not meant here.]
- Haben Sie im Jahr 2014 an mindestens einer beruflichen Weiterbildung teilgenommen?**
[In 2014, have you participated in at least one further vocational training?]

Frequency distribution (N=18)

Answer	TP
Ja [Yes]	8
Nein [No]	10
Trifft nicht zu, bin bereits in Rente/Pension [Not applicable, already in pension]	-

Cognitive techniques:

General Probing, Specific Probing

Findings:

The aim of the probing questions for question 3 was to find out whether the test persons can classify their further vocational training, what they understand by further vocational training, whether the supplementary explanation is helpful or too long and whether the reference to the "already mentioned training courses" is necessary.

Eight test persons stated that they had participated in at least one training course in 2014. The spontaneous comments show that test persons 07 and 08 have difficulties with the question.

Test person 07 asks whether formal continuing education is meant by further vocational training. After the interviewer has read out the explanatory text once again, test person 07 comes to the conclusion that non-formal forms such as the private reading of a textbook are also meant by further vocational training: *"Even if I sit down in the evening and read a textbook for an hour."*⁵

The test person 08 states that after the training as a nurse she has completed an additional training as a specialist nurse. Since she considers this to be the highest vocational qualification, she would not have initially stated this as further training in question 3: *"But the question did say that the previously stated is not meant. So I would say 'no'."*⁶ Finally, test person 08 states her additional qualification as further education.

The test persons who participated in further training in 2014 (TP 03, 06, 07, 08, 10, 11, 12, 16) indicate the following training: correspondence course, time management course, participation in a summer school, additional qualification as a specialist nurse, Master of Law degree, welding course, retraining as a specialist warehouse clerk and further training in Business English. Test person 03 indicated the correspondence course as vocational further training, although it is a university degree, which is raised with question 2. All eight test persons are "very sure" that the further vocational training took place in 2014.

The question of what the test persons understand by further vocational training reveals different conceptual understandings. While test person 07 understands further vocational training to include non-formal behaviour such as reading a textbook in private, test person 10 considers a higher vocational training or university degree, their master's degree. For some test persons (TP 01, 02, 08) it remains unclear whether they understand the term further vocational training in the intended sense.

The test persons 03, 05, 06, 09, 11, 12, 13, 14, 15, 16, 17 and 18 understand by the term vocational further training that events are attended which have to do with the profession. Further vocational training is understood, for example, as follows:

- *"That the employer participates, and that it helps me advance in my field."*⁷ (TP 03)
- *"Any form of further education that concerns the profession I pursue."*⁸ (TP 05)
- *"This is a further education that aims to work better or more purposefully in the job. To optimize the way we work. It has to do with the job itself, not personally."*⁹ (TP 06)
- *"By this question I understand that I would have taken courses or seminars or even online training that would have helped me in some way in my everyday work, in my profession."*¹⁰ (TP 09)
- *"It is important that you never stop learning in order to qualify. There are professions in which you can always improve your skills."*¹¹ (TP 12)

⁵ *"Selbst wenn ich mich abends in den Sessel setze und eine Stunde ein Fachbuch lese."* (TP 07)

⁶ *"Aber in der Frage stand doch, vorher schon angegebenes ist nicht gemeint. Also würde ich sagen 'Nein'."* (TP 08)

⁷ *"Dass sich der Arbeitgeber daran beteiligt und dass es mich in meinem Berufsfeld weiterbringt."* (TP 03)

⁸ *"Jegliche Form von Weiterbildung, die den Beruf betrifft, den ich ausübe."* (TP 05)

⁹ *"Das ist eine Weiterbildung, die darauf abzielt im Beruf besser oder zielstrebig zu arbeiten. Die Arbeitsweise zu optimieren. Es hat mit dem Beruf selbst zu tun, nicht persönlich."* (TP 06)

¹⁰ *"Unter dieser Frage verstehe ich, dass ich Kurse oder Lehrgänge oder auch Online-Schulungen belegt hätte, die mich im Rahmen meines Arbeitsalltages, meines Berufes irgendwie weitergebracht hätten."* (TP 09)

- *"So in my line of work, it's mostly sales training that's being done. Maybe even in the area of expertise."*¹² (TP 15)

When asked how comprehensible the test persons found the explanations of what is meant by further vocational training, three persons (TP 01, 04, 09) state that they found the explanations "rather difficult to understand":

Test person 01 justifies this by saying that the explanation causes confusion and does not create clarity: *"Yes, I had that in the beginning. From experience, I think you can already imagine that when you hear the term. If you explain the term so precisely now, you feel rather confused. It seems redundant to me."*¹³ Test person 09 also justified her assessment with redundancy: *"That's a sentence far too long. A nested sentence and in the end you didn't know the beginning anymore. And somehow it answered itself. Redundant."*¹⁴

Test person 04 has difficulty understanding what is not further training and understanding the word further training measure:

- TP 04: *"So further training measure is, I think, a not so common word. Then pre-training deepens, expands or whatever or retraining and then coming to language. Everything is thrown in there. A difference to further training or what continuing training is not, was not explained. [...] I know the word "measure" especially in relation to job centres or employment agencies and that is why it does not fit in well. A measure is rarely taken on one's own initiative."*¹⁵

TL: *"What's the alternative?"*¹⁶

TP 04: *"Further training courses, opportunities, routes."*¹⁷

Test person 11, who finds it difficult to distinguish between further training and a refresher measure, has a similar situation: *"I'm just wondering whether I can actually count my welding course as further training, because it is actually a repetition every two years, a refresher course. Is a refresher course*

¹¹ *"Dass man halt nie aufhört zu lernen, für die Qualifikation ist es wichtig. [...] Es gibt Berufe, in denen man sich immer weiterbildet."* (TP 12)

¹² *"Also bezogen auf meine Branche sind das hauptsächlich Verkaufsschulungen, die da gemacht werden. Eventuell auch mal im Bereich Fachwissen."* (TP 15)

¹³ *"Ja, das hatte ich schon am Anfang. Aus Erfahrung denke ich, man kann sich das schon vorstellen, wenn man den Begriff hört. Wenn man den Begriff jetzt so genau erläutert, dann fühlt man sich eher verwirrt. Das kommt mir dann eher redundant vor."* (TP 01)

¹⁴ *"Das ist ein viel zu langer Satz. Ein verschachtelter Satz und am Ende hast du den Anfang nicht mehr gewusst. Und irgendwie hat er sich selbst beantwortet. Redundant."* (TP 09)

¹⁵ *"Also Weiterbildungsmaßnahme ist, glaube ich, ein nicht so gebräuchliches Wort. Dann Vorbildung vertieft, erweitert oder wie auch immer oder eine Umschulung und dann auf Sprache zu kommen. Da ist alles hineingeworfen. Ein Unterschied zu Fortbildung oder was eine Weiterbildung nicht ist, wurde nicht erklärt. [...] Ich kenne das Wort Maßnahme eben gerade in Bezug auf Jobcenter oder Arbeitsagentur und deswegen passt es nicht so. [...] Eine Maßnahme ist selten auf eigene Initiative."* (TP 04)

¹⁶ *"Was könnte man alternativ nehmen?"* (Testleiter)

¹⁷ *"Weiterbildungskurse, -möglichkeiten, -wege."* (TP 04)

*an advanced training course?"*¹⁸ After all, the TP counts this refresher course as further training, because it is about deepening and renewing professional knowledge.

The majority of the test persons (N=11) find the explanations "rather easy" or "very easy to understand". Test person 07 notes, however, that the wording itself is easy, but the term itself leaves too much room for interpretation.

Recommendations:

Question: Some of the test persons had difficulties in differentiating what does and what does not belong to further vocational training, e.g. private further training in informal structures. The word "further training measure" also led to problems of understanding. We recommend the following formulation:

The following questions are about further vocational training. By this we mean your participation in a further education or training event. "Vocational" means that you deepen or improve your knowledge and skills for your professional life. This also includes computer courses or e-learning offers that do not require personal attendance. The reading of specialist literature or independent learning of new computer programs are not meant here. The duration of further training can be from a few hours to several months. It does not matter whether you have chosen to pursue further education on your own initiative or whether it was initiated by your employer or by a public institution such as the Federal Employment Agency. Nor is it a question here of the vocational qualification you have previously stated or of any other vocational qualification you may currently be acquiring.

[Bei den folgenden Fragen geht es um berufliche Weiterbildung. Wir meinen damit Ihre Teilnahme an einer Weiterbildungs- oder Fortbildungsveranstaltung. „Beruflich“ bedeutet, dass Sie Ihr Wissen und Können für Ihr berufliches Leben vertiefen oder verbessern. Dazu zählen **auch Computerkurse oder E-Learning-Angebote**, die keine persönliche Anwesenheit erfordern. Das Lesen von Fachliteratur oder selbstständiges Erlernen neuer Computerprogramme sind hier nicht gemeint. Die Dauer der Weiterbildung kann wenige Stunden bis mehrere Monate umfassen. Dabei spielt es keine Rolle, ob Sie die Weiterbildung von sich aus angestrebt haben oder ob sie von Ihrem Arbeitgeber oder von einer öffentlichen Einrichtung wie der Bundesagentur für Arbeit veranlasst wurde. Es geht hier auch nicht um den beruflichen Abschluss, den Sie zuvor angegeben haben, oder um einen weiteren beruflichen Abschluss, den Sie evtl. derzeit erwerben.]

Answer options: No changes recommended.

¹⁸ „Ich bin bloß gerade am Überlegen, ob ich meinen Schweißerlehrgang eigentlich als Weiterbildung zählen kann, weil es ist ja eigentlich eine Wiederholung, alle zwei Jahre, eine Auffrischung. Ist eine Auffrischung eine Weiterbildung?“ (TP 11)

Questions to be tested:

4.	<p>Wir bitten Sie nun um nähere Angaben zu Ihrer wichtigsten beruflichen Weiterbildung. [We would now like to ask you to give us more details of your most important further vocational training]</p> <p>Über welche Dauer hat sich diese Weiterbildung erstreckt? Wenn Ihre Weiterbildung aus mehreren Einzelveranstaltungen bestand, meinen wir den Zeitraum zwischen der ersten und der letzten Veranstaltung. (TL: Liste 3 vorlegen) [How long did this further training last? If your further training consisted of several individual events, we mean the period between the first and the last event. (TL: Present list 3)]</p> <p><i>(TL: Hier ist die Weiterbildung gemeint, die die befragte Person subjektiv für am wichtigsten hält.)</i> <i>[(TL: This refers to the training that the person interviewed subjectively considers to be most important)]</i></p>
<p><i>TL: Wenn bei Frage 4 Kategorie 1, 2 oder 3 („Einige Stunden“, „Einen Tag“, „Mehr als einen Tag, aber weniger als eine Woche“).</i> <i>[TL: If for question 4 category 1, 2 or 3 (“Some hours”, “One day”, “More than one day but less than one week”).]</i></p>	
5.	<p>Wie viele Stunden waren dies? _____ Stunden [How many hours were that? _____ hours]</p>
<p><i>TL: Wenn bei Frage 4 Kategorie 4 („Mindestens eine Woche, aber weniger als einen Monat“).</i> <i>[TL: If for question 4 category 4 (“At least one week but less than one month”).]</i></p>	
6.	<p>Wie viele Stunden waren dies pro Woche? _____ Stunden [How many hours were that per week? _____ hours]</p>
<p><i>TL: Wenn bei Frage 4 Kategorie 5 oder 6 („Mindestens einen Monat, aber weniger als drei Monate“, „Drei Monate oder mehr“).</i> <i>[TL: If for question 4 category 5 or 6 (“at least one month but less than three months”, “three months or more”)]</i></p>	
7.	<p>Wie viele Stunden waren dies pro Monat? _____ Stunden [How many hours were that per month? _____ hours]</p>

Frequency distribution (N=8)

Answer question 4	TP	TP-ID.	Duration (Questions 5-7)	Hours
1 Some hours	1	06	Hours	6
2 One day	1	11	Hours	4
3 More than a day but less than one week	-	-	Hours	-
4 At least one week but less than one month	1	07	Hours per week	56
5 At least one month but less than three months	1	03	Hours per month	60
6 Three months or more	4	08	Hours per month	40
		10	Hours per month	64
		12	Hours per month	120 ¹⁹
		16	Hours per month	120-140

Cognitive Techniques:

General Probing, Information Retrieval Probing

Findings:

This question was asked to the eight test persons (TP 03, 06, 07, 08, 10, 11, 12, 16) who in question 3 stated that they had participated in at least one further vocational training course in 2014. In this question, the respondents were asked to give details of their most important further vocational training in 2014. The duration of the test persons most important further vocational training varies between "some hours" (TP 11); "one day" (TP 06); "at least one week but less than one month" (TP 07); "at least one month but less than three months" (TP 16) and "three months or more" (TP 03, 08, 10, 12).

Test person 07 is initially unaware that the question only concerns the duration of the most important vocational training in 2014 and would like to decide on the category "three months or more": *"Under the conditions mentioned, it is of course difficult for me to draw the line. I assume that really every measure is meant now, formal and informal, then this is a continuous process that I am not concluding. That means three months and more"*²⁰ (TP 07). The interviewer then reads the question again, whereupon test person 07 states that these are merely *"completed events"*²¹ and chooses answer op-

¹⁹ TP 12 understands "one month" to mean three weeks and therefore calculates the duration of the training as 3x40 hours = 120 hours and not 160 hours

²⁰ *"Unter den genannten Bedingungen ist es natürlich schwer für mich, das abzugrenzen. Ich setze voraus, dass jetzt wirklich jede Maßnahme gemeint ist, formell und informell, dann ist das ein kontinuierlicher Prozess, den ich nicht abschließe. Das heißt, drei Monate und mehr"* (TP 07)

²¹ *"abgeschlossene Veranstaltungen"* (TP 07)

tion 4 (at least one week, but less than one month): *"Exactly one week, oh no, then it is number 4. There is a week included."*²² (TP 07)

Test person 16 is also initially unsure of the period to which the question refers. She mentions some additional further training courses that differ from the previous language course as the most important further vocational training. After the interviewer has pointed out that the question only refers to the most important further vocational training in 2014, the test person answers with *"eight weeks"*²³ and correctly assigns herself to the category "At least one month, but less than three months".

All eight test persons state that they found it "very easy" to state the duration of the most important further training in 2014. Test person 07, however, bases this assessment only on the information on the duration of the event. It was difficult for her to decide which was the most important further training: *"Yes, I would have to establish a ranking, which was now the most important. That is difficult"*²⁴ (TP 07).

After the eight test persons had provided information on the entire period of the most important further vocational training in 2014, they were then asked (question 5, 6 or 7) how many hours the respective further training had taken. The two test persons who had indicated in the previous question that the respective continuing vocational training lasted "a few hours" (TP 11) or "one day" (TP 06) were asked how many hours. Test person 06 indicated six hours and TP 11 four hours. Both test persons found the answer easy.

Test person 07 chose the fourth category in question 4 (At least one week, but less than one month) and was therefore asked about the number of hours per week the training took place. She answered the question with 56 hours and found the indication of the hours to be "rather easy": *"Well, there were five days of program on site and in the end there were reading tasks to be done, that was the other two days. In about 8 hours. 8 hours per day, mind you"*²⁵ (7 days of 8 hours = 56 hours).

Finally, those test persons (category 5: TP 16; category 6: TP 03, 08, 10, 12) were asked for the number of hours per month who indicated in question 4 that the corresponding training had lasted "at least one month but less than three months" (category 5) or "three months or more" (category 6). The two test persons 03 and 12 find the answer to the question "very easy". However, the remaining three test persons (TP 08, 10, 16) indicate that they found the answer to the question "rather difficult". Test person 08 gives the value 40 hours per month, but mentions that she only added up the theory lessons and did not include the practical part: *"Because you don't really have the learning time in hours in your head. Am I now trained for two days or two weeks? And that is never constant. The school days are clearly defined, but the practical part is difficult to assess"*²⁶ (TP 08). Test person 10 also finds it difficult to decide whether she should count the hours she spent on further education in addition to the actual event: *"[...] I had to think about how many hours she actually spent. Should I add the hours I spent alone at my desk or not and besides I had two semesters and I had different hours per*

²² „Genau eine Woche, ach nein, dann ist es Nummer 4. Da ist eine Woche eingeschlossen.“ (TP 07)

²³ „acht Wochen“ (TP 16)

²⁴ „Ja da müsste ich ja eine Rangfolge festlegen, welche jetzt die wichtigste war. Das ist schwer“ (TP 07)

²⁵ „Also, es waren fünf Tage Programm vor Ort und es waren letztendlich noch Leseaufgaben dabei, die zu erledigen waren, das waren die anderen zwei Tage. In etwa 8 Stunden. 8 Stunden pro Tag wohl gemerkt“ (TP 07)

²⁶ „Weil man die Anlernzeit nicht so richtig in Stunden im Kopf hat. Bin ich da jetzt zwei Tage oder zwei Wochen eingearbeitet worden? Und das ist ja auch nie konstant. Die Schultage sind klar abgegrenzt, aber das praktische ist schwierig einzuschätzen“ (TP 08)

week and should I have chosen an average?"²⁷ She chooses 64 hours a month "without any prep time..."²⁸

Test person 16 admits to having difficulties in answering the question, but these problems lie only in the actual adding up of the hours and not in the fact that the test person cannot remember the number of hours: "Because I am already so dependent on the computer and am no longer used to mental arithmetic"²⁹ (TP 16).

Overall, it must be made clear that the questions relate exclusively to the most important further training in 2014 for the respondents, although it has not been explicitly asked to date which one this was. If this has been clearly conveyed to the test persons, they are able to remember the duration of their further vocational training to the greatest extent possible. This also makes it clear that the longer the duration of further vocational training – for example, more than one month – the more likely it is that the number of hours will be overlooked. Beyond that, it is potentially unclear what the respondents for categories 4, 5 and 6 should add up in terms of hours at all in question 4: If the total duration of further vocational training that lasted longer than one week (Category 4: "At least one week but less than one month") or one month (Category 5: "At least one month but less than three months"; Category 6: "Three months or more") is to be determined, the number of weeks or months over which the event lasted must also be recorded.

Recommendations: In the case of the question about the duration of the most important further vocational training in 2014, additional questions should be implemented in order to obtain exactly this information. In the case of several further training courses, a query as to which further training course this was can support the respondents' ability to remember. We therefore recommend the following question sequence:

Questions: If the answer to question 3 is "yes":

[Falls bei Frage 3 "Ja" geantwortet wurde:]

a) How many further vocational training courses did you attend in 2014?

[Wie viele berufliche Weiterbildungen haben Sie im Jahr 2014 besucht?]

(open answer)

[(offene Angabe)]

b) What was for you the most important further vocational training in 2014?

[Was war die für Sie wichtigste berufliche Weiterbildung in 2014?]

(open answer)

[(offene Angabe)]

²⁷ „[...] Ich musste nachdenken wie viele Stunden tatsächlich. Soll ich die, die ich am Schreibtisch alleine verbracht habe, dazuzählen oder nicht und außerdem hatte ich zwei Semester und da hatte ich unterschiedliche Wochenstunden und hätte ich da einen Durchschnitt wählen sollen?“ (TP 08)

²⁸ „ohne irgendwelche Vorbereitungszeit [...]“ (TP 08)

²⁹ „Weil ich schon so abhängig vom Computer und das Kopfrechnen nicht mehr gewöhnt bin“ (TP 16)

c) How long did this further training course last?

[Über welche Dauer hat sich diese Weiterbildungsveranstaltung erstreckt?]

If your professional training consisted of several individual events, we mean the period between the first and the last event. (Leave answer categories as they are.)

[Wenn Ihre berufliche Weiterbildung aus mehreren Einzelveranstaltungen bestand, meinen wir den Zeitraum zwischen der ersten und der letzten Veranstaltung. (Antwortkategorien belassen.)]

d) An instruction shall also be provided as to whether or not the hours should be included for any preparation and follow-up times.

If for question 4 category 1, 2 or 3 ("A few hours", "A day", "More than a day but less than a week")

[Wenn bei Frage 4 Kategorie 1, 2 oder 3 („Einige Stunden“, „Einen Tag“, „Mehr als einen Tag, aber weniger als eine Woche“).]

5. How many hours were that in total? Please also take into account your preparation and follow-up times.

[Wie viele Stunden waren dies insgesamt? Bitte berücksichtigen Sie auch Ihre Vor- und Nachbereitungszeiten.]

If for question 4 category 4 ("At least one week but less than one month")

[Wenn bei Frage 4 Kategorie 4 („Mindestens eine Woche, aber weniger als einen Monat“).]

6.1 How many weeks were that?

[Wie viele Wochen waren dies?]

6.2 And how many hours per week were these? Please also take into account your preparation and follow-up times.

[Und wie viele Stunden waren dies pro Woche? Bitte berücksichtigen Sie auch Ihre Vor- und Nachbereitungszeiten.]

If for question 4 category 5 or 6 ("At least one month but less than three months", "Three months or more")

[Wenn bei Frage 4 Kategorie 5 oder 6 („Mindestens einen Monat, aber weniger als drei Monate“, „Drei Monate oder mehr“).]

7.1 How many months were that?

[Wie viele Monate waren dies?]

7.2 And how many hours were these per month? Please also take into account your preparation and follow-up times.

[Und wie viele Stunden waren dies pro Monat? Bitte berücksichtigen Sie auch Ihre Vor- und Nachbereitungszeiten.]

Question to be tested:

8. Als Sie an dieser Weiterbildung teilgenommen haben, waren Sie da...
[When you took this course, you were there...]

TL: Bitte Liste 5 vorlegen.

[TL: Please provide list 5.]

TL: Alle Personen, die mindestens eine Stunde pro Woche (nicht im Rahmen einer betrieblichen Ausbildung) arbeiten, gelten als erwerbstätig.

[TL: All persons who work at least one hour per week (not in an in-company training) are considered to be in employment.]

TL: Wenn eine Person die Schule, Hochschule oder Fachschule besucht und nebenher arbeitet, zählt sie als erwerbstätig. Wenn sie nebenher nicht arbeitet, gilt sie als nicht erwerbstätig.

[TL: When a person attends school, college or technical school and works at the same time, she counts as employed. If she does not work at the same time, she counts as not employed.]

Frequency distribution (N=8)

Answer	Quantity TP
1 Erwerbstätig [Employed]	4
2 Selbstständig [Self-employed]	-
3 Arbeitslos gemeldet [Registered unemployed]	1
4 In einer betrieblichen Ausbildung [In an in-company training]	1
5 Nicht erwerbstätig [Not employed]	2

Cognitive Techniques:

General Probing, Specific Probing, Comprehension Probing

Findings:

This question was asked of all those test persons (TP 03, 06, 07, 08, 10, 11, 12, 16) who answered in question 3 that they had participated in at least one further vocational training course in 2014. All eight test persons can assign themselves to one of the answer categories. With the exception of the category "self-employed", all answer options are mentioned at least once. Only one test person (TP 08) judges the answering of the question as "rather difficult", as she is unsure whether she should assign herself to category 1 (employed) or category 4 (in-company training): "I have to decide between 1 or 4. Well, I have been paid regularly, but the loss I made in the end due to the school days I have compensated in such a way that I have committed myself not to quit afterwards in such and such a long time. I say company training. [...] I thought to myself that I was employed because I received my regular salary all the time. But then I thought to myself that [the specialist nurse training] was organized in a company and not run by an outside contractor. That's why I chose [answer] 4, because it

was both organized and held at the company."³⁰ Test person 08 finally opts for the answer category "In in-company training". However, this assignment is not correct because the test person has acquired a further vocational qualification during her employment, i.e. while working part-time, which she should have indicated in question 2 for the highest vocational qualification.

The four test persons (TP 03, 06, 07, 11) who state that they were in employment at the time of the training explain the choice of their answer as follows

- "I was working as a teacher at the time."³¹ (TP 06)
- "It was an in-company training course. So I enjoyed the training while working, during working hours."³² (TP 11)

Test person 12, who states that she was "registered unemployed" at the time of the training, also places herself correctly. Test persons 10 and 16 indicate that they were "not employed" during the further training. Whereas test person 10 was a student at that time and thus also classifies herself correctly, test person 16 states that she was "not employed", although according to her own information she was registered as unemployed at the time of the further training. Test person 16 explains this as follows: "I was looking for a job. I wrote applications. [...] Because the employment office is not so important to me. I feel that not being employed is more important."³³ Consequently, test person 16 (falsely) uses the answer category "not employed" as an alternative to "registered unemployed".

Furthermore, the test persons were asked what they understand by the category "not employed". The following table shows examples of who, in the view of the test persons, can be counted as "not employed":

³⁰ „Ich muss mich entscheiden zwischen 1 oder 4. Also, ich bin regulär bezahlt worden, aber den Verlust, den ich im Endeffekt gemacht habe durch die Schultage, habe ich so ausgeglichen, dass ich mich verpflichtet habe, hinterher so und so lange nicht zu kündigen. Ich sage mal betriebliche Ausbildung. [...] Ich dachte mir, ich war erwerbstätig, weil ich die ganze Zeit meinen regulären Lohn erhalten habe. Aber dann habe ich mir überlegt, dass [die Fachausbildung zur Fachkrankenschwester] ja betrieblich organisiert war und nicht von einem Fremdunternehmer geleitet wurde. Deswegen habe ich mich dann für [Antwort] 4 entschieden, weil es sowohl betrieblich organisiert war als auch betrieblich abgehalten.“ (TP 08)

³¹ „Ich war in der Zeit berufstätig als Lehrer.“ (TP 06)

³² „Es war eine betriebliche Weiterbildung. Von daher während der Arbeit, während der Arbeitszeit habe ich die Weiterbildung genossen.“ (TP 11)

³³ „Ich war auf Jobsuche. Hab Bewerbungen geschrieben. [...] Weil mir das Arbeitsamt nicht so wichtig ist. Ich empfinde, dass ich nicht erwerbstätig bin als wesentlicher.“ (TP 16)

Answer	Number of mentions
Arbeitslose/-suchende [Unemployed/Employment seekers]	7 (TP 03, 06, 07, 08, 10, 11, 16)
Rentner [Pensioner]	4 (TP 10, 11, 12, 16)
Hausfrauen/-männer [Housewives/Housemen]	3 (TP 07, 10, 16)
Schüler/Studenten [Pupils/Students]	3 (TP 07, 08, 16)
Kranke Menschen/Pflegefälle [Sick people/nursing cases]	3 (TP 11, 12, 16)
Sozialhilfeempfänger [Welfare recipients]	2 (TP 10, 16)
Väter/Mütter in Elternzeit [Fathers/mothers on parental leave]	1 (TP 03)

Auf die Nachfrage, ob es ihnen bei der Einordnung geholfen hätte, wenn zu der Kategorie „Nicht erwerbstätig“ Beispiele wie „Hausfrau/-mann, Rentner, schulische Ausbildung“ genannt worden wären oder ob dies an dieser Stelle nicht notwendig sei, geben drei Testpersonen (TP 03, 06, 11) an „Ja, das hätte mir geholfen“ und fünf Testpersonen (TP 07, 08, 10, 12, 16) „Nein, das war hier nicht notwendig“. Offenkundig denken aber sechs der befragten acht Personen auch an Arbeitslose bzw. Arbeitssuchende, die sich zum Teil in Kategorie 3 „Arbeitslos gemeldet“ einordnen sollten, sowie drei Testpersonen an Schüler und Studenten, die sich zum Teil in Kategorie 4 „In einer betrieblichen Ausbildung“ einordnen sollten. Folglich gibt es Überschneidungen der Kategorie „Nicht erwerbstätig“ mit anderen Antwortoptionen, sie ist somit nicht trennscharf.

When asked whether it would have helped them in their classification if examples such as "housewife, pensioner, school education" had been given for the category "not employed" or whether this was not necessary at this point, three test persons (TP 03, 06, 11) stated "Yes, that would have helped me" and five test persons (TP 07, 08, 10, 12, 16) "No, that was not necessary here". Obviously, however, six of the eight persons surveyed also think of unemployed persons or job seekers who should partly classify themselves in category 3 "Registered unemployed" and three test persons think of pupils and students who should partly classify themselves in category 4 "In in-company training". Consequently, there is an overlap between the category "Not in employment" and other response options, so that it is not clearly defined.

Recommendations:

Question: No changes recommended.

Answer options: Category 3: "Registered unemployed or looking for work" [„Arbeitslos gemeldet oder arbeitssuchend“]

Category 5: "Not working (retired, pupil/student/PhD candidate, on parental leave) [„Nicht erwerbstätig (in Ruhestand, noch Schüler/Student/Promovend, in Elternzeit)“]

For more detailed information, the respective groups subsumed under "Not employed" can be listed individually.

Question to be tested:

9. Was war der wichtigste Grund, der Sie im Jahr 2014 daran gehindert hat an einer beruflichen Weiterbildung teilzunehmen?
[What was the most important reason that prevented you in 2014 from participating in further vocational training?]

TL: Liste 4 vorlegen.

[TL: Present list 4.]

TL: Die TP bitten, nur den wichtigsten Grund auszuwählen.

[TL: Ask the TP to select only the most important reason.]

Frequency distribution (N=10)

Answer	TP
1 Im letzten Jahr war kein passendes Weiterbildungsangebot verfügbar. [Last year there was no suitable training programme available.]	2
2 Die Weiterbildung fand zu einer ungünstigen Zeit oder an einem ungünstigen Ort statt. [The training took place at an inappropriate time or place]	-
3 Meine beruflichen Termine haben mir für Weiterbildung keine Zeit gelassen. [My professional appointments have left me no time for further training.]	1
4 Meine familiären Verpflichtungen haben mir für Weiterbildung keine Zeit gelassen. [My family commitments have left me no time for further training.]	-
5 Mein Arbeitgeber hat meine Weiterbildungsabsichten nicht unterstützt. [My employer did not support my training intentions.]	-
6 Die Teilnahme an einer beruflichen Weiterbildung hätte meine persönlichen Berufschancen nicht verbessert. [Taking part in further vocational training would not have improved my personal career prospects.]	1
7 Eine berufliche Weiterbildung wäre mit Kosten oder Verdienstausschlag verbunden gewesen. [Further vocational training would have entailed costs or loss of earnings.]	-
8 Ich habe es mir nicht zugetraut, an einer Weiterbildung teilzunehmen. [I did not dare to take part in further training.]	-
9 Mir fehlten die Teilnahmevoraussetzungen. [I lacked the prerequisites for participation.]	-
10 In meinem Alter lohnt sich Weiterbildung nicht mehr. [At my age, further training is no longer worthwhile.]	1
11 Ich hatte keinen Überblick über Weiterbildungsangebote. [I had no overview of further training offers]	-
12 Ich hatte kein Interesse an Weiterbildung. [I had no interest in further training.]	2

13 Ein anderer Grund, und zwar: [Another reason, that is:]	3
Ausbildung/Lehre beendet [Training/Apprenticeship completed]	1
Beginn einer neuen Arbeitsstelle [Starting a new job]	1
Innerhalb der Bewerbungsphase [Within the application phase]	1

Cognitive techniques:

Specific Probing

Findings:

This question was answered by all those test persons (TP 01, 02, 04, 05, 09, 13, 14, 15, 17, 18) who stated in question 3 that they had not participated in any further vocational training in 2014.

Three test persons (TP 02, 14, 15) chose answer option 13 (Another reason, namely) and gave the reasons "Training/Apprenticeship completed" (TP 02); "Starting a new job" (TP 14) and "Within the application phase" (TP 15).

A total of four test persons (TP 02, 05, 14, 15) mention that they would have liked to give several reasons:

- *"I've also been looking around for some further training. There it would have been the loss of earnings and the costs, because I wouldn't have known if the boss would pay for it. I could not have afforded it. Over a thousand euros. Yes, actually [answer] 13 was the decisive factor."*³⁴ (TP 02; "Another reason")
- *"Basically, I can name two things here. Firstly, 'My employer did not support my training intentions'. He generally does not do that. The other, another reason: I was in the application phase and accordingly, I was hoping to get a job, to be able to fully concentrate on it."*³⁵ (TP 15; "Another reason")

Test person 18 initially has difficulty in assigning herself to an answer category because she is not sure whether she should answer the question from her own perspective or that of the Office: *"Do you think for me now or what the Office has said? Well, for me it was practically my foot illness, but from the Office's point of view it was 'At my age, further training is no longer worthwhile'. So at least not the one I wanted."*³⁶ (TP 18; "At my age it's not worth continuing education."). In the end, she decided in favour of the statement of the office, because this was for her "worse than health reasons".

³⁴ „Ich hab auch schon mal mich umgeschaut nach irgendwelchen Weiterbildungen. Da wäre es dann auch der Verdienstausschlag und die Kosten gewesen, weil ich nicht gewusst hätte, ob es der Chef bezahlt. Ich hätte es mir nicht leisten können. Über tausend Euro. Ja, eigentlich war [Antwort] 13 das ausschlaggebende.“ (TP 02; „Ein anderer Grund“)

³⁵ „Im Grunde genommen kann ich hier zwei Dinge nennen. Zum einen ‚Mein Arbeitgeber hat meine Weiterbildungsabsichten nicht unterstützt‘. Das macht er generell nicht. Zum anderen, ein anderer Grund: Ich war in der Bewerbungsphase und dementsprechend habe ich darauf gehofft, dass ich einen Job bekomme, mich voll und ganz darauf konzentrieren kann.“ (TP 15; „Ein anderer Grund“)

³⁶ „Meinen Sie jetzt für mich oder was das Amt gesagt hat? Also, für mich war es praktisch meine Krankheit am Fuß, aber vom Amt her war es ‚In meinem Alter lohnt sich Weiterbildung nicht mehr‘.“

Ultimately, however, all test persons can decide on one or the "most important reason" that prevented them from participating in further vocational training in 2014.

A total of six test persons (TP 01, 04, 05, 13, 14, 17) found the answer to the question "very easy". Four test persons (TP 02, 09, 15, 18) state that it was "rather easy" for them to decide, which was the most important reason that prevented them from participating in further training in 2014. Test person 01 also mentions that she *"did not even finish reading"*³⁷ (TP 01; "My professional appointments did not leave me time for further training") and that the list was therefore not necessary for her to answer the question.

Subsequently, the test persons were asked whether they could think of any other reason why people could not participate in further training. Five test persons (TP 01, 02, 09, 13, 18) give reasons why people might not have taken part in further training. However, these can each be assigned to one or more of the existing answer categories on the list and therefore do not represent "other reasons": *"Perhaps because they are not informed of offers by their employer? Or think that there is no time frame for this."*³⁸ (TP 09; corresponds to answer options 11 "I had no overview of further training offers" and 3 "My professional appointments did not leave me time for further training"). However, test persons 14 and 17 can give further reasons that are not yet on the list:

- *"Yes, my reasons exactly. That you've just finished a training course or you're starting a new job."*³⁹ (TP 14; "I've recently completed a training course.")
- *"Healthwise, that you can no longer practice further training."*⁴⁰ (TP 17; "Health reasons prevented me from pursuing further training.")

According to this, two additional reasons "I have only recently completed a further training course" and "Health reasons prevented me from further training" result from the statements of the test persons.

All in all, it can be stated that the test persons can largely assign themselves to a given answer option in the list without any difficulties worth mentioning and that they were basically able to commit themselves to one of the most important reasons that prevented them from participating in further vocational training in 2014.

Also zumindest nicht die, die ich wollte." (TP 18; „In meinem Alter lohnt sich Weiterbildung nicht mehr.")

³⁷ *„nicht einmal fertig gelesen [hat]" (TP 01; „Meine beruflichen Termine haben mir für Weiterbildung keine Zeit gelassen.")*

³⁸ *„Vielleicht weil sie weder von ihrem Arbeitgeber auf Angebote hingewiesen werden? Oder denken, dass dafür kein zeitlicher Rahmen da ist." (TP 09; entspricht den Antwortoptionen 11 „Ich hatte keinen Überblick über Weiterbildungsangebote." und 3 „Meine beruflichen Termine haben mir für Weiterbildung keine Zeit gelassen.")*

³⁹ *„Ja eben genau meine Gründe. Also, dass man gerade erst eine [Weiterbildung] hinter sich hat oder eben einen neuen Job [anfängt]." (TP 14; „Ich habe erst kürzlich eine Weiterbildung abgeschlossen.")*

⁴⁰ *„Gesundheitlich, dass man es nicht mehr so ausüben kann die Weiterbildung." (TP 17; „Gesundheitliche Gründe hinderten mich an einer Weiterbildung.")*

Recommendations:

Question: No changes recommended.

Answer options: Three additional reasons could be added to the response options:

"I've recently completed a further training course."

[„Ich habe kurz zuvor eine Weiterbildung abgeschlossen.“]

"I was in the application phase for a new job."

[„Ich habe mich in der Bewerbungsphase für eine neue Stelle befunden.“]

"Health reasons prevented me from pursuing further training."

[„Gesundheitliche Gründe hinderten mich an einer Weiterbildung.“]

Question to be tested:

10. Über berufliche Weiterbildung hinaus, gibt es auch die Möglichkeit an allgemeiner Weiterbildung teilzunehmen. Allgemeine Weiterbildung hat meist einen privaten Zweck und dient dem Erwerb oder der Erweiterung eigener Kenntnisse und Fertigkeiten (z.B. Musik, Sport, Erziehung, Gesundheit, Kunst, Politik, Technik oder Kochen). Auch hier kann der zeitliche Umfang zwischen einigen Stunden und mehreren Monaten liegen.
[In addition to further vocational training, there is also the possibility to participate in general further training. General further education usually has a private purpose and serves to acquire or extend one's own knowledge and skills (e.g. music, sport, education, health, art, politics, technology or cooking). Here, too, the amount of time can vary from a few hours to several months.]
- Haben Sie im Jahr 2014 an mindestens einer allgemeinen Weiterbildung teilgenommen?**
[In 2014, have you participated in at least one general further training course?]
(TL: Die bereits genannten beruflichen Weiterbildungen sind hier nicht mehr gemeint.)
[(TL: The further vocational training courses already mentioned are no longer meant here).]

Frequency distribution (N=18)

Answer	TP
Ja [Yes]	5
Nein [No]	13

Cognitive Techniques:

General Probing, Specific Probing, Comprehension Probing

Findings:

Five test persons (TP 05, 06, 07, 10, 16) state that they have participated in at least one general training course in 2014, the remaining 13 test persons have not participated in a general further training course in 2014.

By general further training course, most test persons understand continuing education events, such as courses dealing with their hobbies or personal competencies (TP 01, 02, 06, 07, 08, 09, 10, 11, 13, 15), as the following exemplary quotations show:

- "General further training aims at developing my personality and my personal competencies. In contrast to professional training, which is about acquiring skills that are relevant to everyday work."⁴¹ (TP 06)

⁴¹ „Allgemeine Weiterbildung zielt ja darauf, dass ich mich in meiner Persönlichkeit, in meiner persönlichen Kompetenz weiterentwickle. Im Gegensatz zur beruflichen, da geht es ja darum sich Kompetenzen anzueignen, die im Berufsalltag relevant sind.“ (TP 06)

- *"Anything that broadens the personal horizon. Acquisition of knowledge and skills not necessarily related to my employment, but which can."*⁴² (TP 07)
- *"I was thinking about cooking classes, painting classes, classes in general."*⁴³ (TP 08)
- *"By general further training I mean things that one does not need professionally or scholastic, but is doing out of private interest."*⁴⁴ (TP 10)

It is not clear from test person 05 and 16 what exactly they mean by "general further training":

- *"In general, about me and my life. My lifestyle, which helps me."*⁴⁵ (TP 05)
- *"I would consider general education more of a recreational activity."*⁴⁶ (TP 16)

The test persons 12, 14, 17 and 18 understand by general further training also activities such as reading newspapers, books or magazines, watching news or also quiz shows on television.

Test person 04 always interprets the term "further training" as vocational further training and would understand general further training as personality development:

- TP 04: *"I would always consider further training as professional. So not in private."*⁴⁷

TL: *"Would you have another word for continuing education when you say that continuing training is always professional for you? What would these further training classes be here?"*⁴⁸

TP 04: *"This could be understood in the broadest sense as personality development."*⁴⁹

All test persons, with the exception of test person 09, found the explanations of the term general further training "very easy" or "rather easy to understand". Test person 09 justified her naming "rather difficult to understand" as follows: *"Due to the long text. Too redundant. The examples are helpful so that one knows what is meant specifically."*⁵⁰

In addition, the test persons indicate that there is a difference between vocational and general further training. With the exception of test person 12, all test persons indicate that further vocational training is related to their occupation, while general further training is related to private interests and hobbies and can be attributed to leisure activities:

⁴² *„Alles, was den persönlichen Horizont erweitert. Aneignung von Wissen und Fertigkeiten, die nicht notwendigerweise im Zusammenhang mit meiner Erwerbstätigkeit stehen müssen, aber können.“* (TP 07)

⁴³ *„Ich habe an Kochkurse, Malkurse, so an Kurse allgemein gedacht.“* (TP 08)

⁴⁴ *„Unter allgemeiner Weiterbildung verstehe ich Dinge, die man nicht beruflich oder schulisch braucht, sondern aus privatem Interesse macht.“* (TP 10)

⁴⁵ *„Allgemein, was mich und mein Leben betrifft. Mein Lebensstil, was mir hilft.“* (TP 05)

⁴⁶ *„Allgemeine Weiterbildung würde ich eher als Freizeitvergnügen ansehen.“* (TP 16)

⁴⁷ *„Ich würde Weiterbildung immer beruflich sehen. Also nicht privat.“* (TP 04)

⁴⁸ *„Hätten Sie ein anderes Wort für Weiterbildung, wenn Sie sagen, eine Weiterbildung ist für Sie immer beruflich? Was wären diese Weiterbildungsarten hier?“* (TL)

⁴⁹ *„Das könnte man im weitesten Sinne als Persönlichkeitsbildung verstehen.“* (TP 04)

⁵⁰ *„Aufgrund des langen Textes. Zu redundant. Die Beispiele sind hilfreich, damit man weiß, was konkret gemeint ist.“* (TP 09)

- *"One is an training that has a specific purpose and the other is a general training that effectively interests you."*⁵¹ (TP 01)
- *"Professional training is training in itself, it is professional. Its purpose is to position oneself in the job or to improve. [...] And general further training is leisure time. It's a leisure time frame that I create for myself."*⁵² (TP 04)
- *"Further vocational training is something that helps me to get ahead in my profession. This general is then my life, my personal life, be it language, cooking, whatever there is."*⁵³ (TP 05)
- *"Further vocational training serves for the acquisition of skills that serve for the profession. General further training is the acquisition of one's own interests, skills or knowledge."*⁵⁴ (TP 14)
- *"Well, for me, further vocational training only refers to the subject I am doing in my job [...] General further training is easy if you broaden your own horizon a little. Speak of politics or cooking, languages, whatever."*⁵⁵ (TP 18)

Test person 12 does not know the difference between vocational and general further training: *"Vocational further training is when I want to continue training in my profession [...] And the general further training is when I work at Benz, for example, and buy the internal Benz newspaper and read about how the Benz is developing, the figures and everything, the income, export, import and therefore the general."*⁵⁶

Recommendations:	In the case of several further training courses, a query about how many further training courses the respondents have taken and which ones were involved can also support the respondents' memory. We therefore recommend the following question sequence:
Introduction:	In addition to professional training, there is also the possibility to participate in general further training. General further training usually has a private purpose and serves to acquire or extend one's own knowledge and skills (e.g. music, sports, education, health, art, politics, technology or cook-

⁵¹ *„Das eine ist eine Ausbildung, die einen bestimmten Zweck verfolgt und das andere ist eine Allgemeinbildung, die einen im Endeffekt interessiert.“* (TP 01)

⁵² *„Berufliche Weiterbildung ist die Weiterbildung an sich, ist eben beruflich. Die hat dann eben den Zweck, sich im Beruf zu positionieren oder zu verbessern. [...] Und allgemeine Weiterbildung, das ist Freizeit. Das ist ein Freizeitrahmen, den ich mir selber schaffe.“* (TP 04)

⁵³ *„Berufliche Weiterbildung ist etwas, dass mich in meinem Beruf weiterbringt, weiterhilft. Dieses allgemeine ist dann mein Leben, mein persönliches Leben, sei es jetzt Sprache, Kochen, was es so gibt.“* (TP 05)

⁵⁴ *„Berufliche Weiterbildung dient dem Erwerb von Fähigkeiten, die dem Beruf dienen. Allgemeine Weiterbildung ist, dass man eigene Interessen, die Fertigkeiten oder die Kenntnisse erwirbt.“* (TP 14)

⁵⁵ *„Also, die berufliche Weiterbildung bezieht sich für mich nur auf das Thema, was ich eben im Beruf mache [...] Allgemeine Weiterbildung ist einfach, wenn man seinen eigenen Horizont ein bisschen erweitert. Sprich Politik oder Kochen, Sprachen, egal.“* (TP 18)

⁵⁶ *„Berufliche Weiterbildung ist, wenn ich mich in meinem Beruf weiterbilden will [...] Und die allgemeine Weiterbildung ist, wenn ich zum Beispiel bei Benz arbeite und die interne Zeitung von Benz kaufe und darüber lese, wie sich der Benz entwickelt, die Zahlen und alles, die Einnahmen, Export, Import und deshalb das Allgemeine dann.“* (TP 12)

ing). The duration of the further training can also be from a few hours to several months.

[Über berufliche Weiterbildung hinaus, gibt es auch die Möglichkeit an allgemeiner Weiterbildung teilzunehmen. Allgemeine Weiterbildung hat meist einen privaten Zweck und dient dem Erwerb oder der Erweiterung eigener Kenntnisse und Fertigkeiten (z.B. Musik, Sport, Erziehung, Gesundheit, Kunst, Politik, Technik oder Kochen). Die Dauer der Weiterbildung kann auch hier wenige Stunden bis mehrere Monate umfassen.]

10.1 Have you participated in at least one general training course in 2014?

[Haben Sie im Jahr 2014 an mindestens einer allgemeinen Weiterbildung teilgenommen?]

If in question 10.1 = yes:

[Falls bei Frage 10.1 = ja:]

10.2 How many general training courses did you attend in 2014?

[Wie viele allgemeine Weiterbildungen haben Sie im Jahr 2014 besucht?]

(open answer)

[[offene Angabe]]

10.3 What was the most important general further training in 2014 for you?

[Was war die für Sie wichtigste allgemeine Weiterbildung in 2014?]

(open answer)

[[offene Angabe]]

If question 11 is not only about one (most important or last) general further training, 10.3 can be omitted and multiple answers can be allowed instead for question 11.

Answer options:

No changes recommended.

Question to be tested:

*TL: Wenn in Frage 10 mit „Ja“ geantwortet wurde.
[TL: If the answer to question 10 is 'Yes!']*

11. Um welches Thema ging es bei dieser Weiterbildung hauptsächlich?
[What was the main topic of this training?]
*TL: Liste 6 vorlegen.
[TL: Present list 6]*

Frequency distribution (N=4)

Answer	TP
1 Fremdsprachen [Foreign languages]	10 (two courses), 16
2 Sport oder Entspannung [Sport or relaxation]	06 (two courses)
3 Gesundheitsvorsorge oder -förderung [Health prevention or promotion]	
4 Kreativität, Musik oder Handwerk [Creativity, music or craft]	
5 Computer- oder Softwarenutzung, Informationstechnik [Computer or software use, information technology]	
6 Persönlichkeit oder Kommunikation [Personality or communication]	05
7 Projektmanagement oder Führungskompetenzen [Project management or leadership skills]	
8 Finanzen, kaufmännisches oder betriebswirtschaftliches Wissen [Finance, commercial or business management knowledge]	
9 Politik, Gesellschaft oder Kultur [Politics, society or culture]	
10 Medizin [Medicine]	
11 Naturwissenschaften, Naturkunde oder Umwelt [Natural sciences, natural history or environment]	
12 Psychologie oder Pädagogik [Psychology or pedagogy]	
13 Rechtsthemen [Legal issues]	
14 Technik [Technology]	
15 Sicherheit (z.B. Erste Hilfe, Verkehr) [Safety (e.g. first aid, traffic)]	06
16 Integrationskurse [Integration courses]	
17 Grundbildung (z.B. Lesen, Rechnen) [Basic education (e.g. reading, arithmetic)]	
18 Berufsspezifisches Wissen [Profession-specific knowledge]	
19 Sonstige Themen, und zwar: [Other issues, namely:]	10 (Beekeeper)

Cognitive Techniques:

General Probing, Specific Probing, Comprehension Probing

Findings:

Out of a total of 18 respondents, only five (TP 05, 06, 07, 10, 16) took part in a general further training course in 2014. Test person 05 has taken part in further training in the area of "personality or communication". Test person 16 is classified in the "foreign languages" branch, although she finds it difficult to pinpoint one category: *"Foreign languages in any case. Creativity and music perhaps still. Politics, society and culture. ...because it was also about the stars falling off the stage."*⁵⁷ The respondents 06 and 10 each completed two further training courses. TP 10 gives courses in "foreign languages" and "other topics" (beekeeping), but is irritated by the assignment of the beekeeping seminar: *"I'm not quite sure now, maybe with 11 'natural sciences' or 4 'creativity'? Nope. Maybe with 'other'? Natural science is perhaps a bit too high for beekeepers."*⁵⁸ TP 06 states at first only "Sport or Relaxation". When presenting the list, however, the test person remarks: *"It occurs to me that I have further educated myself in another area. 15 'Safety and first aid.'"*⁵⁹ A test person (TP 07) cannot commit himself at all and justifies this as follows:

- TP 07: *"Well, if I apply this very general definition, I can already say that I find it very difficult to make a list. Because a year is long. I usually do a lot."*⁶⁰

TL: *"You haven't thought about one specific training course, but several?"*⁶¹

TP 07: *"Right. Everything I did, in principle. I could say 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 18. So this is one of those questions with multiple answers."*⁶²

TL: *"It was all about the subject."*⁶³

TP 07: *"I can't name a subject right now."*⁶⁴

In order to check the completeness of the list of topics, the test persons were asked to name any missing areas of the given list No. 6. In this context TP 10 judged the list to be too short and suggested to add the category "hobbies". All other test persons consider the list of topics to be complete and respond accordingly to the question about the number of topics that have been specified that the length of the list is just right.

A further shorter list was subsequently presented to the respondents:

⁵⁷ „Auf jeden Fall Fremdsprachen. Kreativität und Musik vielleicht noch. Politik, Gesellschaft und Kultur. Weil es auch um die Abstürze der Stars ging.“ (TP 16)

⁵⁸ „Ich bin mir jetzt nicht ganz sicher, vielleicht bei 11 ‚Naturwissenschaften‘ oder 4 ‚Kreativität‘? Nee. Vielleicht bei ‚Sonstigen‘? Naturwissenschaft ist vielleicht ein bisschen zu hoch gegriffen für Imkern.“ (TP 10)

⁵⁹ „Mir fällt ein, dass ich mich noch in einem anderen Bereich weitergebildet habe. Und zwar 15 ‚Sicherheit und Erste Hilfe.‘“ (TP 06)

⁶⁰ „Also, wenn ich diese sehr allgemeine Definition anlege, dann kann ich jetzt schon mal sagen, dass mir das sehr schwer fällt eine Liste zu machen. Denn ein Jahr ist lang. Ich mache da in der Regel sehr viel.“ (TP 07)

⁶¹ „Sie haben jetzt nicht an eine konkrete Weiterbildung gedacht sondern an mehrere?“ (TL)

⁶² „Genau. Alles, was ich im Prinzip gemacht habe. Da könnte ich sagen 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 18. Also das ist so eine Frage, bei der man mehrere Antworten angeben kann.“ (TP 07)

⁶³ „Es ging ja um das Thema.“ (TL)

⁶⁴ „Ein Thema kann ich jetzt nicht nennen.“ (TP 07)

Short list

- 1 Grundbildung (z.B. Lesen, Rechnen) [Basic education (e.g. reading, arithmetic)]
 - 2 Berufsspezifisches Wissen [Profession-specific knowledge]
 - 3 Persönlichkeit oder Kommunikation [Personality and communication]
 - 4 Computer, Technik oder Informationstechnik [Computer or software use, information technology]
 - 5 Finanzen oder Recht [Finance or law]
 - 6 Gesundheit [Health]
 - 7 Persönliche Interessensgebiete [Personal areas of interest]
 - 8 Sonstiges, und zwar: [Other, that is:]
-

Now the test persons should make an assessment based on the comparison of both lists. They were therefore asked which list would have made it easier for them to answer the question. Three out of five test persons (TP 05, 06, 07) prefer the longer topic and thus the original list. They justify their answer by saying that the list is more detailed or more complete: *"List 6 is more detailed and list 8 still lacks topics such as medicine"*⁶⁵ (TP 06). In addition, the spontaneous comment of test person 06 shows another advantage of the more detailed topic selection: *"If I had received list 8, it would not have occurred to me that I had taken a safety course. That would have gone under. Therefore, tendency list 6. Definitely."*⁶⁶ So by defaulting multiple categories, the respondents' recall is enhanced. The remaining two test persons (TP 10, 16) decide on the shorter list. While TP 10 sees the advantage in the coarser categories *"Because less is specific. It is broader and one can more easily assign oneself under one point"*⁶⁷, TP 16 prefers the short list because of the lower reading effort: *"I prefer the short [list]. Because it is easier. You do not have to read so much. It is actually relatively much that is addressed. Politics is missing here, of course."*⁶⁸

Although the arguments of the respondents indicate a clear preference for one of the two lists, they were asked to list possible advantages of the other list. It turns out that the scarcity of the second list is on the one hand positively evaluated with regard to the less time required and on the other hand is less deterrent than the long list:

- *"She doesn't scare off [because she's shorter]. You always tend to be lazy."*⁶⁹ (TP 06)
- *"Saving time."*⁷⁰ (TP 07)

⁶⁵ „Die Liste 6 ist ausführlicher und bei der Liste 8 fehlen ja noch Themen, wie beispielsweise Medizin“ (TP 06)

⁶⁶ „Hätte ich die Liste 8 bekommen, wäre mir nicht eingefallen, dass ich einen Sicherheitskurs gemacht habe. Das wäre dann untergegangen. Deswegen Tendenz Liste 6. Definitiv.“ (TP 06)

⁶⁷ „Weil weniger spezifisch ist. Die ist weiter gefasst und man kann sich selbst eher zuordnen unter einen Punkt.“ (TP 10)

⁶⁸ „Die kurze [Liste] ist mir lieber. Weil es einfacher ist. Man muss nicht so viel lesen. Es ist eigentlich relativ viel, was angesprochen wird. Politik fehlt hier natürlich.“ (TP 16)

⁶⁹ „Sie schreckt nicht ab [weil sie kürzer ist]. Man neigt immer dazu faul zu sein.“ (TP 06)

The advantage of the longer list, on the other hand, is seen in the level of detail and the naming of specific topics: *"I find it interesting that there are integration courses on it, and something like music, creativity and handicrafts are not quite so common here [list 8]. [...] I would not have thought of it on my own"*⁷¹ (TP 10). Analogous to the statement of TP 06, the comment of TP 10 further clarifies that the detailed topic specification has a positive influence on the memory performance

In addition, the test persons were also asked for the shorter list if they were missing any areas. TP 10 and 07 cannot complete the list, because in their opinion the general categories cover every aspect or categories of the longer list were combined:

- *"It's sort of short for List 6. It's a collection of categories. Since nothing is missing from List 6, nothing is missing from List 8."*⁷² (TP 07)

- TP 10: *"I had a hard time with List 6 because beekeeping is not a science."*⁷³

TL: *"Where would you have placed yourself on List 8 [short list]?"*⁷⁴

TP 10: *"I would have just taken personal interests."*⁷⁵

The other test persons feel that the list is incomplete. While TP 05 adds foreign languages, TP 06 mentions that safety courses are not considered. TP 16 expands the selection to include politics and society and psychology, but at the same time puts the additions into perspective: *"Politics, society, but it says 'personal areas of interest', so that's where you can classify it. Yes, Psychology is actually missing. Although that's partly cleared up with 'Personality'."*⁷⁶

In the long list (list 6) the aspect "personality or communication" was included. In order to find out what the test persons understand by "personality" in this context, they were asked to explain the term and give examples. The statements show that personality as a further training topic is connected with the development of personal competencies, whereby TP 16 defines the term very generally and does not refer to concrete further training possibilities: *"The ability to communicate, personal preferences, introverted or extroverted, different preferences one has, technical understanding or rather emotional, energetic personality or a dreamer, sporty or not sporty, musical or not musical."*⁷⁷ TP 07 and 10 include primarily vocational further training, in particular for the training of leadership skills:

⁷⁰ „Zeitersparnis.“ (TP 07)

⁷¹ „Ich finde interessant, dass da Integrationskurse darauf sind und sowas wie Musik, Kreativität und Handwerk findet man hier [Liste 8] nicht ganz so. [...] Ich wäre von alleine nicht darauf gekommen“ (TP 10)

⁷² „Das ist quasi die Kurzform von Liste 6. Da sind mehrere Kategorien zusammengefasst. Da bei Liste 6 nichts fehlt, fehlt auch bei Liste 8 nichts.“ (TP 07)

⁷³ „Mit der Liste 6 [lange Liste] hab ich mich schwer getan, da Imkerei nicht Naturwissenschaft ist.“ (TP 10)

⁷⁴ „Wo hätten Sie sich bei Liste 8 [kurze Liste] eingeordnet?“ (TL)

⁷⁵ „Ich hätte dann einfach persönliche Interessengebiete genommen.“ (TP 10)

⁷⁶ „Politik, Gesellschaft, aber da steht ja ‚Persönliche Interessensgebiete‘, da kann man das ja auch einordnen. Ja Psychologie fehlt eigentlich. Obwohl, das ist mit ‚Persönlichkeit‘ ja auch zum Teil abgeklärt.“ (TP 16)

⁷⁷ „Die Fähigkeit zu kommunizieren, persönliche Vorlieben, introvertiert oder extrovertiert, verschiedene Vorlieben, die man hat, technisches Verständnis oder eher emotional, energische Persönlichkeit oder ein Träumer, sportlich oder nicht sportlich, musisch oder nicht musisch.“ (TP 16)

- *"Social behavior. Or, more specifically for the profession, leadership skills. Basic personality traits, assertiveness, willpower."*⁷⁸ (TP 07)
- *"The first thing I thought about was communication and the same things you do at management seminars, like body language and how do I talk to someone to package something positively. I didn't think about personality until you asked me."*⁷⁹ (TP 10)

From the statement of TP 10 it can further be deduced that the interpretation of the course topic "personality or communication" goes back more to the second term, whereby the emphasis on professional seminars of the leadership elite also seems plausible. Personality whereas connects TP 10 with coping with personal problems: *"I would rather classify personality under psychology. That people with a very extreme personality try to cope better with it in one direction or another."*⁸⁰ Test persons 05 and 06 also relate the term to aspects of self-management and dealing with personal weaknesses:

- *"How can I deal with problems in my life more easily, how can I learn how to cope with stress and time management or rhetoric seminars, how can I talk better or communicate my topics?"*⁸¹ (TP 05)
- *"Maybe that if you are aggressive, you take part in an anti-aggression course, which changes your personality. Maybe someone is trying to calm down."*⁸² (TP 06)

Overall, respondents were more comfortable with the original more detailed list than with the shorter topic selection when answering the question. This is due in particular to the fact that the more specific default both allows a more precise classification and supports the cognitive memory performance.

Recommendations:

First of all, there is no preceding question about how many training courses the respondents have attended in 2014. Question 11 is based on the assumption that this is only one further training course, this assumption may be incorrect, e.g. three test persons (TP 06, 07, 10) have attended at least two courses. If you only want to refer to a general continuing education event, we recommend to ask the additional question 10.3 in advance and then to refer to it only in question 11.

⁷⁸ *„Sozialverhalten. Oder spezifischer für den Beruf Führungskompetenz. So Grundlegendes, was die Persönlichkeit betrifft, Durchsetzungsstärke, Willensstärke.“* (TP 07)

⁷⁹ *„Ich hab als allererstes an die Kommunikation gedacht und gleich an solche Dinge, die man auch bei Managerseminaren macht, also Körpersprache und wie rede ich mit jemanden, um etwas positiv zu verpacken. Persönlichkeit habe ich mir erst Gedanken gemacht als Sie mich gefragt haben.“* (TP 10)

⁸⁰ *„Persönlichkeit würde ich eher unter Psychologie verbuchen. Dass Menschen mit einer sehr extremen Persönlichkeit versuchen, in die eine oder andere Richtung versuchen damit besser zurechtzukommen.“* (TP 10)

⁸¹ *„Wie kann ich mit Problemen in meinem Leben leichter umgehen, wie lerne ich das, Stressbewältigung und Zeitmanagement oder Rhetorikseminare, wie kann ich mich besser unterhalten oder meine Themen rüberbringen.“* (TP 05)

⁸² *„Ja vielleicht, dass man vielleicht wenn man aggressiv ist an einem Antiaggressionskurs teilnimmt, da ändert sich ja auch die Persönlichkeit. Dass vielleicht jemand versucht ruhiger zu werden.“* (TP 06)

10.3 What was the most important general further education in 2014 for you?

[Was war die für Sie wichtigste allgemeine Weiterbildung in 2014?]

(open answer)

[(offene Angabe)]

If question 11 is not only about one (most important or last) general further training, 10.3 can be omitted and multiple answers can be allowed instead for question 11.

Answer options: No changes recommended.

Question to be tested:

Nun möchten wir Ihnen noch einige Fragen zu Ihrer aktuellen Berufstätigkeit stellen.

[Now we would like to ask you some more questions about your current job.]

12. Waren Sie in der letzten Woche erwerbstätig?

[Have you been employed in the last week?]

(TL: Erwerbstätig bedeutet, dass die TP mindestens 1 Stunde in der letzten Woche für Geld gearbeitet hat.)

[(TL: employed means that the TP has worked for money for at least 1 hour in the last week.)]

Frequency distribution (N=18)

Answer	TP
Ja [Yes]	14
Nein [No]	4

Cognitive Techniques:

Emergent Probing

Findings:

As the frequency table illustrates, out of a total of 18 subjects, 14 were employed in the week prior to the survey. Four test persons (TP 10, 12, 17, 18) were not employed, while three of the four test persons (TP 12, 17, 18) are registered unemployed.

Recommendations:

Question:

Question 12 did not cause any problems per se, but difficulties arise in question 13 when the respondents are employed but have been on holiday or sick during the last week. Therefore it would be necessary to ask additionally whether the respondent has worked in the last week:

Have you worked in the last week?

[Haben Sie in der letzten Woche gearbeitet?]

Answer options:

Yes. [Ja.]

No, I was on holiday. [Nein, ich hatte Urlaub.]

No, I was sick. [Nein, ich war krank.]

No. [Nein.]

Question to be tested⁸³:

13. Wie viele Stunden haben Sie in der letzten Woche gearbeitet?
[How many hours have you worked in the last week?]

Frequency distribution (N=14)

TP	Number of hours	TP	Number of hours
01	45	10	Not applicable (not employed)
02	45,5	11	40 (Holiday)
03	41 (Holiday)	12	Not applicable (not employed)
04	40	13	80
05	20 (Holiday)	14	40 – 45 (Sick)
06	- (Holiday)	15	30
07	40	16	14
08	35	17	Not applicable (not employed)
09	35	18	Not applicable (unemployed/partially incapacitated)

Cognitive Techniques:

Emergent Probing

Findings:

As mentioned above, 14 out of 18 test persons are employed. Accordingly, only 14 test persons (TP 01, 02, 03, 04, 05, 06, 07, 08, 09, 11, 13, 14, 15, 16) were asked how many hours they had worked in the week before the pretest. Nine of them (TP 01, 02, 04, 07, 08, 09, 13, 15, 16) actually worked and were therefore able to provide direct information on the question. Four respondents (TP 03, 05, 06, 11) were on holiday and could therefore only make an estimate based on previous weeks. TP 14 also had to give an estimate because she was ill. From the spontaneous comments of the test persons, various problems regarding the answering of the question become apparent. For one thing, it is not clear to the test persons whether the contractually agreed working time is asked or the actual number of hours worked: *"Formal or actual? If it is not further specified, I would state the formal working time simply because I do not have to think about it. The formal working time would be 40, the actual working time would be higher, more than 50 hours. But in response, I would give the formal working time here, just when I am short. With the actual one I would have to think longer"*⁸⁴ (TP 07). In addition,

⁸³ Questions 13-15 were only asked to those persons who stated in question 12 that they had been employed in the previous week.

⁸⁴ „Formell oder tatsächlich? Wenn es nicht näher spezifiziert wird, würde ich die formelle Arbeitszeit angeben, einfach nur weil ich darüber nicht nachdenken muss. Die formelle Arbeitszeit wäre 40. Die tatsächliche wäre höher, mehr als 50 Stunden. Aber als Antwort würde ich hier die formelle

another problem can be taken from the statement, which is also reflected in the statements of other test persons. Some test persons find it difficult to remember the exact working hours. Therefore, it can be assumed that they too – as TP 07 already mentioned – tend to give formal information, unless the wording explicitly asks for the actual hours.

- *"Normally 39.5 hours, but due to the order situation we often work on weekends."*⁸⁵ (TP 02)
- *"I'm not sure. I reduced. I'll say 35. That's the regular number of hours. I've reduced it to 80%."*⁸⁶ (TP 08)
- *"It varies every week, 75% I work there. That's why the average is 30 hours a week. Correspondingly. So, it's distributed according to the week. Sometimes there's a weekend shift, sometimes not, and accordingly it's sometimes 34, sometimes 26 hours. Depending on that."*⁸⁷ (TP 15)

Recommendations:

Question: It is unclear which working time specification the question is aimed at. It would have to be specified whether it is a matter of contractual or actual working hours. We recommend that the question be reworded:

How many hours have you actually worked in the last week, regardless of your contractually agreed working hours?

[Wie viele Stunden haben Sie in der letzten Woche tatsächlich gearbeitet, ungeachtet Ihrer ggfs. vertraglich vereinbarten Arbeitszeit?]

If the recommendations for the differentiated recording of the reasons why the interviewees did not work during the previous week are not adopted (question 12), this question requires an instruction as to what persons who were absent during the previous week due to holidays or illness etc. should state.

angeben, gerade wenn ich kurz angebunden bin. Bei der tatsächlichen müsste ich länger nachdenken" (TP 07)

⁸⁵ *„Normalerweise 39,5 Stunden, aber durch die Auftragslage ist es oft so, dass wir am Wochenende arbeiten.“ (TP 02)*

⁸⁶ *„Ich weiß nicht genau. Ich habe reduziert. Ich sage mal 35. Das ist die reguläre Stundenzahl. Ich habe auf 80% reduziert.“ (TP 08)*

⁸⁷ *„Das variiert jede Woche, 75% arbeite ich dort. Deswegen sind es im Durchschnitt 30 Stunden die Woche. Dementsprechend circa. Also, das wird verteilt je nach Woche. Mal ist eine Wochenendschicht dabei, mal nicht und dementsprechend sind es mal eben 34, mal 26 Stunden. Je nach dem.“ (TP 15)*

Question to be tested⁸⁸:

14. Bei der Beantwortung der folgenden Fragen geht es um Ihre Kenntnisse und Fertigkeiten, die Sie an Ihrem Arbeitsplatz benötigen und einbringen. Dabei spielt es keine Rolle, ob Sie dafür ein Zeugnis oder ein Zertifikat erhalten haben oder nicht.
Zunächst interessieren uns Ihre arbeitsbezogenen Kenntnisse. Es geht hier um Ihr Wissen, das Sie in der Praxis, bei der Ausbildung oder aus Büchern erworben haben. Dieses Wissen kann auch Kenntnisse über Abläufe und Vorgehensweisen beinhalten.
[Answering the following questions is about the knowledge and skills you need and use in your workplace. It does not matter whether or not you have been awarded a diploma or certificate for this.
First of all, we are interested in your work-related knowledge. This is about the knowledge you have acquired in practice, during training or from books. This knowledge may also include knowledge of processes and procedures.]
- Wie schätzen Sie Ihr Wissen im Vergleich dazu ein, was für die Erledigung Ihrer Arbeit erforderlich ist?
[How do you rate your knowledge in comparison to what is required for the completion of your work?]
(TL: Vorgaben vorlesen.)
[[TL: Read out the instructions.]]

Frequency distribution (N=14)

Answer	Quantity TP
1 Ich weiß mehr als erforderlich ist. [I know more than is necessary.]	9
2 Für diese Arbeit bräuchte ich weitere Kenntnisse, die ich mir aneignen sollte. [For this work I would need further knowledge, which I should acquire.]	3
3 Ich weiß genau so viel wie erforderlich ist. [I know exactly as much as is necessary.]	2

Cognitive Techniques:

General Probing, Specific Probing, Comprehension Probing

Findings:

In total, nine (TP 02, 06, 07, 08, 09, 11, 14, 15, 16) of the 14 test persons state that they know more than is necessary to do their job, three test persons (TP 01, 03, 04) admit that they need further knowledge for their work which they should acquire and two (TP 05, 13) say that they know exactly as much as is necessary.

First of all, it is noticeable that six test persons (TP 01, 02, 03, 04, 07, 14) find it difficult to decide on an answer, because the answer category "For this work I would need further knowledge which I should acquire." is not clearly formulated. This answer category is rather understood in such a way that fur-

⁸⁸ Questions 13-15 were only asked to those persons who stated in question 12 that they had been employed in the previous week.

ther knowledge is always needed in the sense of lifelong learning or an individual wish exists to acquire further knowledge:

- *"Somewhere between the last and the penultimate. I'd like to know more about exactly how it happens, but right now I actually know as much as I need to. [...] Actually, you always need more knowledge."*⁸⁹ (TP 01; Answer: need further knowledge)
- *"I know a lot. I know other things I don't really need to know. Sometimes I feel like I could go deeper into this. It's difficult to answer. I'd take the last one. Although, actually, it makes me feel worse."*⁹⁰ (TP 02; Answer: know more than necessary)
- *"To do my job the way it works, I would say a) [knows more than necessary]. To do the job in such a way that I bring a certain added value or that more happens, I would say b) [needs more knowledge]. [...] Needed, is, rather I would like. Needed, because I have the feeling that I can't do my job otherwise, that would be something else."*⁹¹ (TP 04; Answer: need further knowledge)
- *"Of course, it's difficult to say. Is it about errands or what is meant? Is it about what has been required so far, or what might potentially be required? Altogether, the reference scale is not very clear. When I think about what has been necessary so far, and I have given the answer to this question, I know more. You can ultimately acquire knowledge in the expectation that you will need more in another position in the future."*⁹² (TP 07; Answer: knows more than necessary)
- *"That's a hard one to answer. Because, I'd put a funny cross in the first two. Because, on the one hand, I know more than I need to. But there are still a few things where I should acquire more knowledge. I find that really hard to answer."*⁹³ (TP 14; Answer: knows more than is necessary)

⁸⁹ „Irgendwo zwischen dem Letzten und dem Vorletzten. Ich wüsste gerne mehr darüber wie es genau abläuft, aber momentan weiß ich eigentlich so viel wie nötig ist. [...] Eigentlich braucht man immer weitere Kenntnisse.“ (TP 01; Antwort: bräuchte weitere Kenntnisse)

⁹⁰ „Ich weiß viel. Ich weiß auch andere Sachen, die ich eigentlich gar nicht bräuchte. Manchmal habe ich das Gefühl, ich könnte das noch vertiefen. Es ist schwierig zu beantworten. Ich würde mal das Letzte nehmen. Obwohl, da mache ich mich ja eigentlich schlechter.“ (TP 02; Antwort: weiß mehr als erforderlich)

⁹¹ „Um meinen Job so zu erledigen wie er funktioniert, würde ich sagen a) [weiß mehr als erforderlich]. Um den Job so zu machen, dass ich einen gewissen Mehrwert bringe oder dass noch mehr passiert, würde ich sagen b) [bräuchte weitere Kenntnisse]. [...] Bräuchte, ist so, eher ich möchte. Bräuchte, weil ich das Gefühl hab, ich kann sonst meine Arbeit nicht machen, das wäre dann was anderes.“ (TP 04; Antwort: bräuchte weitere Kenntnisse)

⁹² „Das ist natürlich schwierig zu sagen. Geht es da um Erledigungen oder was ist gemeint? Geht es um das, was bisher erforderlich war, oder was potentiell möglicherweise erforderlich ist? Also der Referenzmaßstab ist nicht ganz klar. Wenn ich daran denke, was bisher notwendig war, darauf bezogen habe ich die Antwort gegeben, da weiß ich mehr. Man kann sich letztendlich auch Wissen aneignen in der Erwartung, dass man in Zukunft in einer anderen Position mehr braucht.“ (TP 07; Antwort: weiß mehr als erforderlich)

⁹³ „Das ist schwer zu beantworten. Weil, ich würde irgendwo witzigerweise die ersten beiden ankreuzen. Weil einerseits weiß ich natürlich mehr als erforderlich ist. Aber es gibt trotzdem noch ein paar Sachen, wo ich mir noch mehr an Kenntnissen aneignen sollte. Das finde ich total schwer zu beantworten.“ (TP 14; Antwort: weiß mehr als erforderlich)

It is noticeable that the five test persons have difficulties to position themselves on the answer scale because it is not clear that the second answer category means that they do not have sufficient knowledge to do their current work.

When asked what they understand by "work-related knowledge" and whether they can think of any other examples, all fourteen test persons answer in analogy to TP 03: *"What I need to know to do my daily work"*⁹⁴. Furthermore, test persons 15 and 16 note that the acquisition of work-related knowledge requires training or studies.

With regard to the examples given, a distinction can be made between hard and soft skills. Five test persons (TP 03, 08, 09, 11, 14) mention only hard skills, six test persons (TP 02, 04, 06, 07, 15, 16) mention both hard and soft skills and three persons do not mention any examples of work-related knowledge. The following are examples of respondents who are considered to have hard skills, i.e. specialist knowledge or knowledge of processes:

- *"For example, master InDesign and Photoshop."*⁹⁵(TP 03)
- *"Know and understand clinical pictures, therapy, diagnostics and ward structure."*⁹⁶ (TP 08)
- *"Knowledge of various tools we work with, e.g. SAP, MS Office and communication media."*⁹⁷ (TP 09)
- *"Yes, as a welder, of course. I build coaches and this is a very complex skeleton, which we build here, which goes over several stations. And as I said before, there are jigs and fixtures. That's where I insert my pipes, weld them off, take it out with a crane and move it on."*⁹⁸ (TP 11)

Soft skills such as pedagogical abilities, social or presentation skills, didactics or general dealing with people are only mentioned in combination with hard skills:

- *"Things like communication, organization, processing and presentation."*⁹⁹ (TP 04)
- *"Social and professional competence, and pedagogical competence."*¹⁰⁰ (TP 06)
- *"Any information that will help me do my job. knowledge of methods, state of research, didactics."*¹⁰¹ (TP 07)
- *"Definitely social skills. In my line of work, training expertise, basic medical and sales knowledge."*¹⁰² (TP 15)

⁹⁴ „Das, was ich wissen muss, um meine tägliche Arbeit zu erledigen.“ (TP 03)

⁹⁵ „Zum Beispiel InDesign und Photoshop beherrschen.“ (TP 03)

⁹⁶ „Krankheitsbilder, Therapie, Diagnostik und Stationsstruktur kennen und verstehen.“ (TP 08)

⁹⁷ „Kenntnisse über diverse Tools, mit denen wir arbeiten, z.B. SAP, MS Office und Kommunikationsmedien.“ (TP 09)

⁹⁸ „Ja, als Schweißer klar natürlich. Ich baue Reisebusse und das ist ein sehr komplexes Gerippe, was wir hier aufbauen, das über mehrere Stationen geht. Und wie schon gesagt, es gibt Vorrichtungen. Da lege ich meine Rohre ein, schweiß sie ab, hol das mit dem Kran raus und fahre es weiter.“ (TP 11)

⁹⁹ „So Sachen wie Kommunikation, Organisation auch Verarbeitung und Präsentation.“ (TP 04)

¹⁰⁰ „Soziale Kompetenz und die fachliche Kompetenz, sowie pädagogische Kompetenz.“ (TP 06)

¹⁰¹ „Jede Art von Information, die mir dabei hilft, meine Arbeit zu erledigen. Methodenkenntnisse, Wissen über Forschungsstand, Didaktik.“ (TP 07)

¹⁰² „Definitiv Sozialkompetenz. Auf meine Branche bezogen Fachwissen im Bereich der Trainingslehre, medizinisches Grundwissen und vertriebliche Kenntnisse.“ (TP 15)

- *"So when I sit at the computer, computer skills. When I'm at the cash register, that I know how to work this thing. Then the ability to concentrate. Which is not part of the process. That you can deal with people, remain friendly and polite even in difficult situations."*¹⁰³ (TP 16)

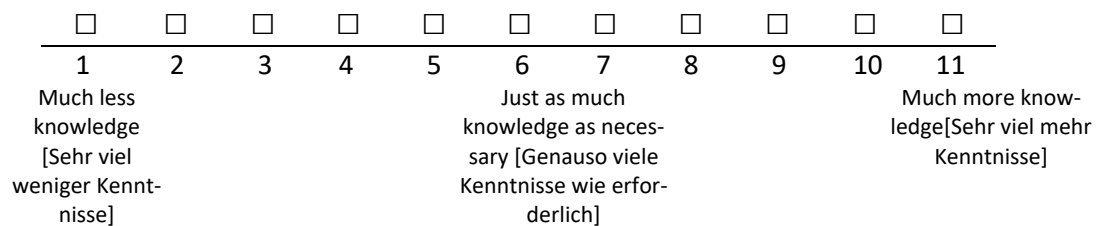
In summary, it can be said that all 14 test persons were able to locate themselves and also have a partly very concrete idea of what the term "work-related knowledge" means. However, the answer category "For this work I would need further knowledge, which I should acquire." is not clearly defined. This has led to irritation on the one hand, and on the other hand to the fact that the test persons have not been able to locate themselves here even if they have sufficient or even more extensive knowledge to carry out their current work.

Recommendations:	As a general rule, before the set of questions on work-related knowledge and skills, information should be provided in advance in a clearly defined introductory text on which different areas are to be surveyed in the following, so that the respondents do not take all work-related skills into account in the first question (see also the findings on question 15).
Introduction:	<p>Answering the following questions is about <u>your knowledge</u> - i.e. your expertise - <u>and your skills</u> - i.e. the skills you need and use in your workplace. It does not matter whether or not you have been awarded a diploma or certificate for this.</p> <p>[Bei der Beantwortung der folgenden Fragen geht es um <u>Ihre Kenntnisse</u> - also Ihr Wissen - <u>und um Ihre Fertigkeiten</u> - also Ihr Können, das Sie an Ihrem Arbeitsplatz benötigen und einbringen. Dabei spielt es keine Rolle, ob Sie dafür ein Zeugnis oder ein Zertifikat erhalten haben oder nicht.]</p> <p>We are initially interested in your <u>work-related knowledge</u>. This is about your knowledge, which you have acquired in practice, during training or from books. This knowledge can also include knowledge of processes and procedures.</p> <p>[Zunächst interessieren uns Ihre <u>arbeitsbezogenen Kenntnisse</u>. Es geht hier um Ihr Wissen, das Sie in der Praxis, bei der Ausbildung oder aus Büchern erworben haben. Dieses Wissen kann auch Kenntnisse über Abläufe und Vorgehensweisen beinhalten.]</p>
Question:	<p>Please think about the day-to-day execution of your work: How do you rate your knowledge compared to what is required to do your job? This is not about the possible extension of tasks or your career in the job.</p> <p>[Bitte denken Sie an die alltägliche Ausführung Ihrer Arbeit: Wie schätzen Sie Ihr Wissen im Vergleich dazu ein, was für die Erledigung Ihrer Arbeit erforderlich ist? Es geht hier nicht um die möglichen Erweiterungen der Aufgaben oder Ihre Karriere im Job.]</p> <p>(INT: Present list with answer scale)</p> <p>[(INT: Liste mit Antwortskala vorlegen.)]</p>

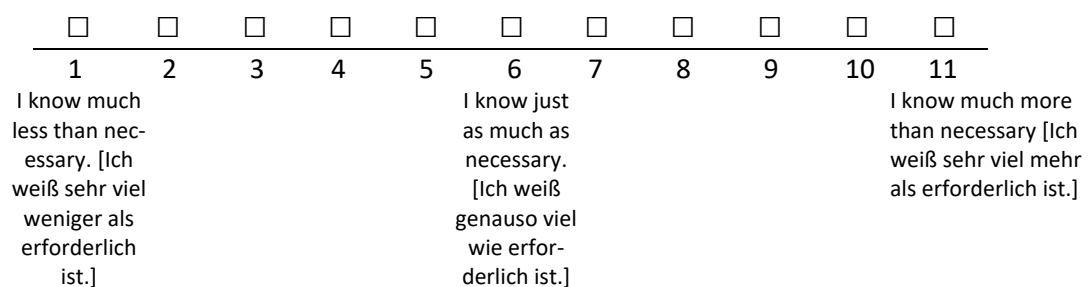
¹⁰³ „Also wenn ich am Computer sitze, EDV-Kenntnisse. Wenn ich an der Registrierkasse sitze, dass ich weiß wie ich das Ding zu bedienen hab. Dann die Fähigkeit mich zu konzentrieren. Wobei das gehört nicht zu Abläufen. Dass man mit Menschen umgehen kann, freundlich und höflich bleibt auch in schwierigen Situationen.“ (TP 16)

Answer options:

The answer category "For this work I would need further knowledge which I should acquire" has to be adjusted, as it is not clear that it is not sufficient knowledge to do the work. In addition, a scale with three answer options allows only slight variance and promotes socially desirable answering behaviour. To counteract this, we recommend the use of a bipolar, end-point and center-labeled 11-point scale:



An alternative naming of the scale points, which explicitly takes up the target dimension "knowledge" in the scale, but is longer:



Question to be tested¹⁰⁴:

15. Nun geht es um Ihre arbeitsbezogenen Fertigkeiten, die Sie erlernt haben, also Ihr Können. Dies können praktische Fertigkeiten, wie bspw. das richtige Bedienen einer Maschine, aber auch logisches oder kreatives Denken sein.

[Now it's all about your work-related skills that you have learned, in other words your ability. These can be practical skills, such as the correct operation of a machine, but also logical or creative thinking.]

Wie schätzen Sie Ihr Können im Vergleich dazu ein, was für die Erledigung Ihrer Arbeit erforderlich ist?

[How do you rate your skills in comparison to what is required for the completion of your work?]

(TL: Vorgaben vorlesen.)

[[TL: Read out the instructions]]

Frequency distribution (N=14)

Answer	TP
1 Ich kann mehr als erforderlich ist. [I can do more than is necessary.]	7
2 Für diese Arbeit bräuchte ich weitere Fertigkeiten, die ich mir aneignen sollte. [For this work I would need other skills that I should acquire.]	2
3 Ich kann genau so viel wie erforderlich ist. [I can do exactly as much as is necessary.]	5

Cognitive Techniques:

General Probing, Specific Probing, Comprehension Probing

Findings:

In total, seven (TP 04, 06, 08, 09, 11, 14, 16) of the 14 test persons say that they can do more than is necessary to do their job, two (TP 01, 07) admit that they need additional skills for their work that they should acquire and five (TP 02, 03, 05, 13, 15) say that they can do exactly as much as is necessary.

It is also noticeable in question 15 that the two test persons (TP 01, 07) who choose the answer category "For this work I would need further skills that I should acquire" choose this answer because they think that you can always learn more: "You can always do better. I don't think I would ever answer that question any other way."¹⁰⁵ (TP 07).

In addition, eleven test persons find it difficult to answer the question, either because they perceive several stimuli (TP 14, 15), or because they find it difficult to make a general distinction between

¹⁰⁴ Questions 13–15 were only asked to those persons who stated in question 12 that they had been employed in the previous week.

¹⁰⁵ „Man kann es grundsätzlich immer besser machen. Ich glaube nicht, dass ich die Frage jemals anders beantworten würde.“ (TP 07)

work-related knowledge and skills (TP 01, 03, 04, 06, 07, 08, 09, 13, 16). Test persons 14 and 15 take up different aspects of the given definition to explain their response in more detail and assess their skills for the individual stimuli, sometimes differently:

- *"Yes, well I find it difficult to answer, very difficult. Well, I think the examples are good, but in my case I still lack a few skills to use the tool properly. However, when it comes to logical or creative thinking, I have more skills than I need."*¹⁰⁶ (TP 14; Answer: can do more than necessary)
- *"Concerning as skills that one acquires, for example, a machine setting [...] there, I am definitely not beyond skills. As for analytical thinking, it's difficult to say. I don't know. But I don't think I'm beyond what is required. What I bring to the table is what is required. Yeah, I can't say beyond that, I don't know. I don't have enough experience for that, maybe in other areas as well."*¹⁰⁷ (TP 15; Answer: can do as much as necessary)

The other nine test persons, who find it difficult to answer the question, see little difference between work-related knowledge and skills in relation to their respective jobs:

- *"Skill sounds a little more technical than knowledge, but in principle, there's no difference."*¹⁰⁸ (TP 01)
- *"If I know something, then I can use it somehow and then I have the skill and I can use it, make it and put it into practice. So how can you really separate the two?"*¹⁰⁹ (TP 03)
- *"I would answer the question as before [like question 14], because I cannot and would not distinguish greatly between knowledge and skills. It would be different if I were physically working."*¹¹⁰ (TP 04)
- *"Whether that is competence or skill. That's a fine line. Communication would again be a skill or the preparation for a lesson."*¹¹¹ (TP 06)

¹⁰⁶ „Ja, also ich finde es schwierig zu antworten, sehr schwierig. Also, ich finde die Beispiele eigentlich gut, aber in meinem Fall fehlen mir zum richtigen Bedienen des Tools noch ein paar wenige Fertigkeiten. Allerdings, wenn es jetzt auf das logische oder kreative Denken geht, habe ich da mehr Fertigkeiten als ich benötige.“ (TP 14; Antwort: kann mehr als erforderlich)

¹⁰⁷ „Bezüglich Fertigkeiten, die man sich aneignet, bezogen auf zum Beispiel so eine Maschineneinstellung [...] [d]a bin ich von den Fertigkeiten definitiv nicht drüber hinaus. [...] Was analytisches Denken angeht, schwierig zu sagen. Weiß ich nicht. [...] Aber ob ich da jetzt drüber hinaus bin, was erforderlich ist, glaube ich nicht. [...] Das, was ich da einbringe, ist das, was erforderlich ist. [...] Ja, drüber hinaus kann ich nicht sagen, weiß ich nicht. Dafür habe ich zu wenige Erfahrungen, vielleicht auch in anderen Bereichen.“ (TP 15; Antwort: kann genau so viel wie erforderlich)

¹⁰⁸ „Fertigkeit klingt ein bisschen handwerklicher als Kenntnisse, aber im Prinzip gibt es keinen Unterschied.“ (TP 01)

¹⁰⁹ „Wenn ich was weiß, dann kann ich es auch irgendwie anwenden und dann habe ich auch die Fertigkeit und kann es benutzen, machen und umsetzen. Also wie kann man das so richtig trennen?“ (TP 03)

¹¹⁰ „Ich würde die Frage beantworten wie vorher [wie Frage 14], weil ich zwischen Kenntnissen und Fertigkeiten nicht großartig unterscheiden kann und würde. Es wäre was anderes, wenn ich körperlich arbeiten würde.“ (TP 04)

¹¹¹ „Ob das jetzt Kompetenz ist oder Fertigkeit. Das ist ein schmaler Grat. Kommunikation wäre ja auch wieder eine Fertigkeit oder die Unterrichtsvorbereitung.“ (TP 06)

Asked what the 14 test persons understand by "work-related skills" and whether they can think of other examples than those mentioned in the question, they tend to associate the term with practical activities or doing, often in connection with physical work:

- *"In the penultimate [question 14] I was already thinking about what I was going to do with the goods, where they would arrive and the logistics, and in the last [question 15] I was thinking about how best to pack a box."*¹¹² (TP 01)
- *"Skill is something you learn. By skill I mean something routine, something you do every day, and just something physical."*¹¹³ (TP 04)
- *"We have a Smartboard in the classroom. It would be a skill to use, and I have no trouble with it."*¹¹⁴ (TP 06)
- *"So knowledge [question 14] means I need to know what I'm doing in production. I must have the knowledge of how the whole production should or can run. [...] And the other area [skills] would be rather, how do I implement the whole thing in order to get a smooth process to satisfy the customer."*¹¹⁵ (TP 13)
- *"Well, I would delimit it from the previous [question 14] like this: knowledge is more theory and skills are more practice."*¹¹⁶ (TP 14)

Test person 16 mentions rather general skills that are important in her job: *"The job I'm doing at the moment requires a lot of concentration, conscientiousness, accuracy, you have to be able to calculate, calmness. So, specifically in relation to the job."*¹¹⁷

To get an even better overview, the comparison of the answers to questions 14 and 15 is presented below:

¹¹² *„Bei der vorletzten [Frage 14] habe ich schon dran gedacht, was ich bei dem kompletten Ablauf mit den Waren mache, wo die ankommen und die Logistik und bei der letzten [Frage 15] habe ich dran gedacht wie ich am besten eine Kiste verpacke.“* (TP 01)

¹¹³ *„Fertigkeit, ist etwas Erlernbares [...]. Unter Fertigkeiten verstehe ich schon etwas Routiniertes, etwas, was man jeden Tag tut und halt etwas Körperliches.“* (TP 04)

¹¹⁴ *„Wir haben im Klassensaal ein Smartboard. Es wäre eine Fertigkeit damit umzugehen und damit habe ich keine Schwierigkeiten.“* (TP 06)

¹¹⁵ *„Also Kenntnisse [Frage 14] meint, ich muss wissen, was ich in der Produktion mache. Ich muss die Kenntnisse haben, wie die ganze Produktion ablaufen sollte oder kann. [...] Und der andere Bereich [Fertigkeiten] wäre eher, wie setze ich das Ganze um, um einen reibungslosen Ablauf zu kriegen, um den Kunden zufrieden zu stellen.“* (TP 13)

¹¹⁶ *„Also, ich würde das zum vorherigen [Frage 14] so abgrenzen: Kenntnisse sind eher Theorie und Fertigkeiten sind eher Praxis.“* (TP 14)

¹¹⁷ *„Also bei der Tätigkeit, die ich momentan ausübe, ist sehr viel Konzentration nötig, Gewissenhaftigkeit, Genauigkeit, man muss rechnen können, Gelassenheit. Also speziell auf die Arbeit bezogen.“* (TP 16)

Overview table of work-related knowledge and skills:

TP	Answer question 14	Answer question 15	Same answer
01	Bräuchte weitere Kenntnisse [Need further knowledge]	Bräuchte weitere Fertigkeiten [Need more skills]	Ja [Yes]
02	Weiß mehr als erforderlich [Know more than necessary]	Kann genau so viel wie erforderlich [Can do exactly as much as necessary]	Nein [No]
03	Bräuchte weitere Kenntnisse (vorher: Weiß genau so viel wie erforderlich) [Need further knowledge (previous: Know as much as necessary)]	Kann genau so viel wie erforderlich [Can do exactly as much as necessary]	Nein [No]
04	Bräuchte weitere Kenntnisse [Need further knowledge]	Kann mehr als erforderlich [Can more than necessary]	Nein [No]
05	Weiß genau so viel wie erforderlich [Know as much as necessary]	Kann genau so viel wie erforderlich [Can do exactly as much as necessary]	Ja [Yes]
06	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]
07	Weiß mehr als erforderlich [Know more than necessary]	Braucht weitere Fertigkeiten [Need more skills]	Nein [No]
08	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]
09	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]
11	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]
13	Weiß genau so viel wie erforderlich [Know as much as necessary]	Kann genau so viel wie erforderlich [Can do exactly as much as necessary]	Ja [Yes]
14	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]
15	Weiß mehr als erforderlich [Know more than necessary]	Kann genau so viel wie erforderlich [Can do exactly as much as necessary]	Nein [No]
16	Weiß mehr als erforderlich [Know more than necessary]	Kann mehr als erforderlich [Can more than necessary]	Ja [Yes]

If you compare the answers to question 14 and question 15 directly, you can immediately see that nine of the fourteen test persons gave identical and five different answers to the two questions. Six test persons (TP 01, 06, 08, 09, 13, 16), who gave identical answers to questions 14 and 15, made no or only minor differences between knowledge and skills. This is also the case for three (TP 03, 04, 07) of the five test persons who answer the two questions differently.

- Recommendations:** The recommendations are similar to question 14:
- As a general rule, before the set of questions on work-related knowledge and skills, information should be given in a clearly defined introductory text that different areas are to be surveyed, so that those surveyed do not take all work-related skills into account in the first question (question 14) and as a result find it difficult to distinguish between knowledge and skills (question 15).
- Introduction:** Now it's all about your work-related skills that you have learned, in other words your ability. These can be practical skills, such as the correct operation of a machine, but also logical or creative thinking.
- [Nun geht es um Ihre arbeitsbezogenen Fertigkeiten, die Sie erlernt haben, also Ihr Können. Dies können praktische Fertigkeiten, wie bspw. das richtige Bedienen einer Maschine, aber auch logisches oder kreatives Denken sein.]
- Question:** Please think about the day-to-day execution of your work: How do you rate your skills compared to what is required to complete your work? Again, it is not about the possible extensions of tasks or your career in the job.
- [Bitte denken Sie an die alltägliche Ausführung Ihrer Arbeit: Wie schätzen Sie Ihr Können im Vergleich dazu ein, was für die Erledigung Ihrer Arbeit erforderlich ist? Es geht auch hier nicht um die möglichen Erweiterungen der Aufgaben oder Ihre Karriere im Job.]
- (INT: Present list with answer scale)*
[(INT: Liste mit Antwortskala vorlegen.)]
- Answer options:** The answer category "For this work I would need other skills that I should acquire" needs to be adjusted, as it is not clear that it is about skills that are not sufficient to do the work. In addition, a scale with three response options allows for little variance and promotes socially desirable response behavior. To counteract this, we recommend the use of a bipolar, end-point and center-labeled 11-point scale:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8	9	10	11	
Much less knowledge [Sehr viel weniger Kenntnisse]				Just as much knowledge as necessary [Genauso viele Kenntnisse wie erforderlich]			Much more knowledge [Sehr viel mehr Kenntnisse]				

Alternative naming, which explicitly takes up the target dimension "ability" in the scale, but is longer:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8	9	10	11
I can do much less than necessary [Ich kann sehr viel weniger als erforderlich ist.]				I can do just as much as necessary [Ich kann genauso viel wie erforderlich ist]				I can do much more than necessary [Ich kann sehr viel mehr als erforderlich ist.]		